

PB-232 197

STATE AIR POLLUTION IMPLEMENTATION
PLAN PROGRESS REPORT, JUNE 30 TO
DECEMBER 31, 1973

Environmental Protection Agency
Research Triangle Park, North Carolina

April 1974

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TECHNICAL REPORT DATA <i>(Please read instructions on the reverse before completing)</i>		
1. REPORT NO. EPA-450/2-74-004	2.	3. PB 232 197
4. TITLE AND SUBTITLE STATE AIR POLLUTION IMPLEMENTATION PLAN PROGRESS REPORT, JUNE 30 TO DECEMBER 31, 1973		5. REPORT DATE April 1974
		6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)	8. PERFORMING ORGANIZATION REPORT NO.	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Office of Air Quality Planning and Standards, Office of Air and Water Programs, Research Triangle Park, N.C., and Office of Enforcement and General Counsel, Washington, D.C.		10. PROGRAM ELEMENT NO.
		11. CONTRACT/GRANT NO.
12. SPONSORING AGENCY NAME AND ADDRESS U.S. Environmental Protection Agency Office of Air Quality Planning and Standards Office of Air and Water Programs Research Triangle Park, North Carolina		13. TYPE OF REPORT AND PERIOD COVERED Progress, 6/30 to 12/31/73
		14. SPONSORING AGENCY CODE
15. SUPPLEMENTARY NOTES		
16. ABSTRACT Plans for attainment of national ambient air quality standards have been submitted by all States. This report describes progress toward implementing those plans from June 30 to December 31, 1973. Presently, 16 State Implementation Plans (SIPs) have been fully approved by EPA, discounting disapprovals with respect to maintenance of national standards. Of the other 39 plans, 26 have only regulatory deficiencies, which have been corrected by EPA promulgation, and 13 are being finalized. Extensions for attaining primary standards and for developing plans for attaining secondary standards have been granted, and the status of these extensions is discussed. The status of Federal assistance to States in implementation of SIPs and State and local resource requirements for SIP implementation are examined. National issues affecting the SIPs are discussed. The adequacy of air monitoring networks and air quality data reporting is reviewed. Efforts are needed to improve the distribution and quantity of monitors and to assure timely data reporting. EPA's Plan Revision Management System is discussed. The System, which identifies "possible deficiencies" in the attainment of air quality standards, has been extended to cover 67 Air Quality Control Regions. Deficiencies identified are being investigated by the Regional Offices. The status of EPA enforcement activities is also presented. Compliance schedules are being developed for all major sources, and these schedules are being monitored and enforced.		
17. KEY WORDS AND DOCUMENT ANALYSIS		
a. DESCRIPTORS Air pollution Air quality standards Enforcement (air quality standards) State Implementation Plans	b. IDENTIFIERS/OPEN ENDED TERMS Reproduced by NATIONAL TECHNICAL INFORMATION SERVICE U S Department of Commerce Springfield VA 22151	c. COSATI Field/Group
18. DISTRIBUTION STATEMENT Release Unlimited	19. SECURITY CLASS (This Report) UNCLASSIFIED 20. SECURITY CLASS (This page) UNCLASSIFIED	21. NO. OF PAGES 115 22. PRICE \$ 8.75

(3)/spac+119,1211,1111

PS-230 909

PC11.50/MT1.45

Environmental Protection Agency, Research Triangle
Park, N. C.

- 6) State Air Pollution Implementation Plan Progress
Report, January 1 to June 30, 1973.
(11) Sep 73, (12) 167p
14) EPA-450/2-73-005

mwb Apr 16 CNA 74-11

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JUNE 30 TO DECEMBER 31, 1973**

Prepared by

Office of Air Quality Planning and Standards
Office of Air and Water Programs
U.S. Environmental Protection Agency
Research Triangle Park, North Carolina 27711

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Washington, D.C.

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Research Triangle Park, North Carolina 27711

April 1974

Document is available to the public through the National Technical
Information Service, Springfield, Virginia 22151.

Publication No. EPA-450/2-74-004

FOREWORD

This is the second report depicting the progress States are making toward the attainment of national standards required by the Clean Air Act. This report covers the period June 30 to December 31, 1973, although more current information is noted when applicable.

The State Implementation Plan program continues to be a dynamic process as national issues are translated into effective programs requiring regulations and resources that State control programs utilize in meeting the Clean Air mandates.

As more parts of State Implementation Plans become operational, State and EPA enforcement actions take on added importance to ensure compliance with approved plans. The discussions that follow attempt to compare the status noted in the previous report to subsequent progress made.

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ACKNOWLEDGMENTS

The preparation of this report resulted from information provided by the State and local air pollution control agencies, EPA Regional Offices, and various EPA headquarters groups.

As with the first report relating to State Implementation Plan progress, this edition continues to be a joint effort between the Division of Stationary Source Enforcement, Office of Enforcement and General Counsel, and the Office of Air Quality Planning and Standards, Office of Air and Water Programs.

Information on enforcement activities was provided by the Division of Stationary Source Enforcement, Office of Enforcement and General Counsel. Additional specific information on EPA air programs can be obtained by contacting the EPA Regional Offices.

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ABBREVIATIONS AND SYMBOLS

AQCRs	Air Quality Control Regions
BOAs	Basic Ordering Agreements
CDS	Compliance Data System
CFP	Clean Fuels Policy
CO	Carbon monoxide
CY	Calendar year
EPA	(U.S.) Environmental Protection Agency
FGD	Flue gas desulfurization
FMVECP	Federal Motor Vehicle Emissions Control Program
FY	Fiscal year
HC	Hydrocarbons
NADB	National Aerometric Data Bank
NEDS	National Emissions Data System
NO _x	Oxides of nitrogen
NO ₂	Nitrogen dioxide
OAQPS	Office of Air Quality Planning and Standards (EPA)
OEGC	Office of Enforcement and General Counsel (EPA)
O _x	Total oxidants
PRMS	Plan Revision Management System
SAROAD	Storage and Retrieval of Aerometric Data
SCS	Supplementary Control Systems
SIPs	State Implementation Plans
SO _x	Oxides of sulfur
SO ₂	Sulfur dioxide
TCPs	Transportation Control Plans
TSP	Total suspended particulates
TVA	Tennessee Valley Authority
yr	year

STATE AIR POLLUTION IMPLEMENTATION PLAN PROGRESS REPORT, JUNE 30 TO DECEMBER 31, 1973

SECTION 1 - EXECUTIVE SUMMARY

STATE IMPLEMENTATION PLANS (SIPs)

Overview

Since the last SIP progress report,¹ the number of fully approved SIPs, with no regulatory disapprovals, has dropped from 17 to 16. (These figures do not reflect the fact that all plans have been disapproved with respect to maintenance of national standards and significant deterioration.) The change in the total is the result of two disapprovals related to compliance schedules and one approval based on Environmental Protection Agency (EPA) delegation of authority for public availability of data. Of the 39 plans still having deficiencies, 26 (an improvement of 15 plans since the last report) have only regulatory deficiencies, which have been corrected by EPA promulgation, and 13 (an improvement of 5) are in the stages of finalization by State or EPA action.

Maintenance of Standards

On June 18, 1973, EPA promulgated regulations requiring each State to submit by March 18, 1974, a list of areas likely to violate the national ambient air quality standards for any pollutant in the next

1. State Air Pollution Implementation Plan Progress Report, January 1 to June 30, 1973. U.S. Environmental Protection Agency. Research Triangle Park, N. C. EPA-450/2-73-005. September 1973.

10 years. EPA will review these and publish a final list by June 18, 1974, following which the States must submit plans to assure that such violations do not occur. At present, it appears that the timetable for these actions will be delayed by approximately two months.

Indirect Sources

The June 18, 1973, promulgation also requires States to set forth legally enforceable procedures for a source-by-source review of certain new or modified indirect sources to determine if such construction or modification will violate any control strategy or will interfere with attainment or maintenance of any national ambient air quality standard, because of emissions due to associated mobile source activities. Fifteen State plans have been submitted; 21 additional plans are anticipated by mid-1974, and there are 19 States for which there will probably be no submittal. At present, 17 States lack legal authority to regulate indirect sources.

For those States that did not submit plan revisions and those revisions that were not approvable (all States except Florida and Guam), EPA promulgated regulations for indirect source review on February 25, 1974. These will be withdrawn as approvable State plans are received.

Extensions for Development to Meet Secondary Standards

EPA has granted or provided 18-month extensions for the development of control strategies for achieving secondary standards for particulate matter and/or sulfur dioxide in 19 States involving 37 Air Quality Control Regions (AQCRs). Of the 37, 17 involve particulate, 11 involve sulfur dioxide, and 9 involve both. Three plans for sulfur dioxide and six for particulate matter have been submitted by

the States; none is yet approved. Nine plans for sulfur dioxide and six for particulate matter are under development by EPA.

State submittals for particulate matter and sulfur dioxide were originally due July 31, 1973. However, the sulfur dioxide plan submittal date was changed on September 14, 1973, due to the promulgation of a new secondary standard, thus, making the sulfur dioxide plan submittal date January 14, 1974. The particulate matter plan approval/disapproval date was November 30, 1973. The EPA promulgation date for sulfur dioxide is July 14, 1974, and the EPA promulgation date for particulate matter was January 31, 1974.

Smelters

EPA is proceeding with the promulgation of smelter regulations for three smelters in Utah, Idaho, and Nevada to attain both primary and secondary standards for sulfur dioxide which would require use of available control technology and supplementary control systems where needed. It is anticipated that the regulations will be finalized in the spring of 1974. Efforts are continuing to encourage the States to submit approvable plans (i.e., Arizona, New Mexico, Idaho, Montana, Utah, and Nevada). However, EPA promulgation will probably be necessary. States may submit plans after the EPA promulgations so that EPA regulations could be withdrawn. These actions will satisfy the requirement for developing a plan for meeting the secondary sulfur dioxide standard in these States. Thirteen smelters in the six States listed are involved.

Court Actions on SIPs

Several suits against EPA have had a significant impact on the SIP process. In Rhode Island, the court held that "urban place"

population was not a proper basis for priority classification, and EPA was required to justify the classification procedures. Further, the court directed that SIPs must contain procedures for revising the plan and that EPA must promulgate such procedures if the State refuses to adopt them. The court held variance mechanisms must be consistent with the provisions of the Clean Air Act or the Administrator must disapprove the plan even though existing regulations allow EPA to disapprove any individual variance which is not in keeping with the Act. For the same reasons that the Rhode Island variance procedure must be disapproved, EPA must disapprove the enforcement authority of the Rhode Island air pollution director which permits consideration of economic and social factors and technical feasibility. EPA is to promulgate regulations limiting considerations of economic and social factors or technical feasibility in enforcement after the attainment date.

In Massachusetts, the courts allowed EPA to use information other than the SIP submittal to evaluate and approve or disapprove the plan. The court also ruled that the public availability of emission data is not the State's option and that emission data are not confidential; therefore, EPA was required to disapprove two sections of the Massachusetts plan and to promulgate substitute provisions. This has been done.

In Ohio and Kentucky, the question of reasonableness of plans was raised in a suit filed by industrial interests. The courts held that impossibility of compliance, technical infeasibility, high cost/benefit ratios, and resource unavailability should be "considered" by EPA in approving or disapproving a State plan. It was also held that all

interested parties to SIPs must be given a chance by EPA to comment on them prior to EPA taking action but specifics and degree of detail were not spelled out. Justification of approvals of SIPs and environmental impact statements were found not necessary.

In Georgia, the Fifth Circuit Court found that SIPs allowing or directing withholding of emissions information cannot be approved. The court voided EPA's actions on the Ohio and Kentucky plan and directed that the States resubmit them and that EPA obtain public comment before taking action. This procedure is now in progress.

With regard to granting of time for compliance by sources (variances, etc.) the court declared that no deviation from the requirements in the SIP can be allowed. This conflicts with decisions of other courts which indicated that some flexibility was allowable prior to the date for attainment of national ambient air quality standards but that after such date, the procedures of Section 110(f) of the Act are the only ones allowable. The decision appears unworkable since many State regulations are effective on the date of adoption and thus variances and other kinds of schedules are necessary. Therefore, EPA will seek Supreme Court review of this part of the court decision.

Tall stacks and supplementary control systems can be permitted only (1) if, and to the extent that, permanent quantitative emission controls are not achievable or feasible, or (2) if such controls are in addition to permanent quantitative emission limitations and "standing alone without the dispersion strategy" are adequate to achieve the national ambient standards. State legal authority to

consider costs and technology was struck down as being too broad and as allowing too much consideration of such factors as opposed to health factors.

Energy Issue

Although energy has become a major national issue only in recent months, EPA started initiating actions and programs in late 1972 to alleviate energy problems and is continuing to seek a long run balance between energy considerations and the need for environmental protection. EPA's major actions to date fall into two broad categories: (1) actions that reduce the energy impact of environmental regulations, and (2) actions that reduce total energy consumption.

In the first category, EPA instituted its Clean Fuels Policy in late 1972. This policy is designed to encourage maximum utilization of low-sulfur fuels in those AQCRs where they are needed to attain primary air quality standards and to foster changes in State regulations to allow use of higher sulfur fuels in their areas. In addition, EPA has a policy of granting temporary variance from regulations concerning sulfur in oil where low-sulfur oil is not available. EPA has also been cooperating with the Federal Energy Office in permitting switching from oil to coal in selected power plants where the environmental impacts can be minimized. Finally, EPA has recommended to Congress changes in automotive oxides of nitrogen emissions standards that would have the effect of improving fuel economy. These measures aim at temporarily easing the energy impacts of environmental programs.

EPA has also prompted a number of environmental programs that also reduce energy consumption. The most conspicuous programs of this

type are the transportation control plans, which aim at improving air quality but, in most cases, also result in reduced fuel consumption. EPA has also initiated a new motor vehicle fuel economy labeling program to inform consumers of expected mileage. Over the long run, energy and environmental policies should have many common objectives.

AIR QUALITY AND EMISSION DATA

Air Quality Overview

Suspended particulates remain a problem, in spite of encouraging evidence of downward trends. One-hundred-thirty-eight AQCRs reported at least one station still above a primary standard (24-hour or annual) in 1972. Thirty-four AQCRs have reported no annual 1972 particulate data. Primary 24-hour or annual sulfur dioxide standards were exceeded at one or more locations in only 19 of 162 AQCRs reporting 1972 data.

Data on oxidants and carbon monoxide are quite sparse, but if the limited results are indicative, substantial problems exist with these two pollutants. The primary oxidant standard was exceeded in 21 of 38 AQCRs reporting at least one quarter's data. The primary carbon monoxide standards were exceeded in 42 of 48 AQCRs reporting in 1972.

Adequacy of Air Quality Reporting and Processing

At the conclusion of the fourth quarter of calendar year 1973, data for the second quarter of CY 1973 reaching the Storage and Retrieval of Aerometric Data (SAROAD) system represents less than 60 percent of the total stations reporting in CY 1972. Consequently, an attempt to characterize nationwide air quality status or trends using the incomplete 1973 data presently in hand would be premature and misleading. Four quarters of 1973 data are expected to be in hand for summarization in the next SIP progress report.

Adequacy of Air Quality Monitoring Networks

The number of air sampling stations by pollutant-type reporting data as required in approved SIPs varies from 60 to 200 percent of requirements. However, when the required reporting stations are related to the SIP requirement the percentage by pollutant-type varies from 39 to 84 percent.

Emission Data Reporting and Processing

Emissions data are continually changing due to additions and corrections (e.g., updated emission factors, discovery of new sources, new estimates of emissions from a source, installation of control equipment, shutdown and start up of sources). Consequently, trends due to control activities are characterized as inconclusive. However, the 1972 data based on the National Emissions Data System (NEDS) show significantly higher carbon monoxide and lower particulate emission from industrial processes when compared to the 1971 data. NEDS shows more carbon monoxide for nearly every industrial category. It could be concluded either that NEDS has not adequately accounted for carbon monoxide controls or that the methodology used in 1971 overestimated the extent of control. Another possibility, of course, is that sources of carbon monoxide were inadvertently missed in earlier inventories.

Industrial process particulate emissions compare favorably from 1971 to 1972, except for the mineral products industry, which in 1972 had much lower emissions. As in the case of carbon monoxide emissions, the accountability of control measures for this category could cause this discrepancy.

PLAN REVISION MANAGEMENT SYSTEM

Overview

The Plan Revision Management System (PRMS) analysis has been expanded from the original 17 AQCRs to 67 AQCRs. In addition, the PRMS has been expanded from analysis in relationship to annual particulate matter and sulfur dioxide standards to analysis of all current national ambient air quality standards, except that for nitrogen dioxide.

The Office of Air Quality Planning and Standards provides each Regional Office with detailed copies of the individual PRMS site reviews for each monitoring site identified as having a "possible deficiency" within 60 days of the end of each semiannual reporting period. Data review actions have been initiated by the Regional Offices to determine causes of the identified deficiencies in the first 17 AQCRs within the PRMS.

Two important facts are germane in considering results of these actions. First, because the system considers the applicable State and Federal regulations, transportation control plans, and the Federal Motor Vehicle Control Program in the development of the projected air quality trend, an AQCR will not be "flagged" even though the air quality is considerably above the applicable air quality standards, so long as the observed air quality is following the downward trend predicted on the basis of enforcement of regulations and compliance schedules. Second, the PRMS analyzes only the air quality data currently contained in the SAROAD. Therefore, in a number of cases, because of the incomplete implementation of the quarterly reporting requirements for air quality data, there may be an 8- to 10-month time lag in the currentness

of the data. However, as more States begin to implement the reporting requirements, the system will be able to provide an up-to-date analysis of any specific AQCR and its progress toward attainment of the standards.

Results of Analysis

The current PRMS analysis has identified approximately the same percentage of possible deficiencies (i.e., an air sampling site where trends in air quality indicate that NAAQS will not be reached as of the specified attainment date) in 10 of the original 17 AQCRs as were identified in the first analysis. Seven AQCRs did not have an increased number of monitoring sites available for review and had the same or an increased percentage of possible deficiencies.

A review of the other 50 AQCRs analyzed showed adequate progress being made toward attainment of air quality standards, with the exception of a few localized problems. The AQCRs that did not follow this general trend were principally divided into two groups: (1) those within limited data base and (2) those with increasing ambient concentrations. The AQCRs with a limited data base had fewer than the minimum number of sites required by the SIP and/or a minimal quantity of available data from each site.

For particulate matter, 8 of the 67 AQCRs had a limited data base; for sulfur dioxide, 32 of the 67 AQCRs had a limited data base. Similarly, 14 of 25 AQCRs that were required to have carbon monoxide instruments had less than the minimum number of sites required and 18 of 36 AQCRs that were required to have oxidant instruments had less than the minimum number of sites required reporting sufficient data for analysis.

Possible deficiencies associated with particulate matter were noted in 51 of the 67 AQCRs analyzed. Some of these deficiencies appear to be local in nature since the remainder of the AQCR appears to be progressing as predicted.

Possible deficiencies were associated with carbon monoxide in 13 AQCRs and with oxidant in 8. However, 29 AQCRs have values that are currently above the national standards for carbon monoxide (although only 25 of the 67 AQCRs required CO monitors, an additional 4 AQCRs had data, thus, the 29), and 19 of the 36 AQCRs required to have oxidant monitors have values above the standard. Again, it should be noted that almost 50 percent of the AQCRs that were required to have carbon monoxide and oxidant monitors had less than the minimum number of sites with sufficient data for analysis. Additionally, some AQCRs have a carbon monoxide instrument where no current SIP requirement exists and have recorded values in excess of the standard.

In general, the PRMS analysis indicates that in most AQCRs adequate progress appears to be being made for most sites; however, no relaxation of any of the current ongoing programs should take place. The possible deficiencies should be reviewed to determine their cause and possible solution for that area of the AQCR where the deficiency was noted. The status of sulfur dioxide, carbon monoxide and oxidant will require additional data to really assess the situation and determine if possible deficiencies exist.

SOURCE COMPLIANCE ACTIVITIES

Overview

During the semiannual period covered by this progress report, SIP enforcement activity by EPA has progressed from planning and strategy development to active function. The outputs stemming from implementation of previous strategies cover the following areas: (1) establishment of reasonable compliance schedules for all major sources, (2) surveillance and investigation programs to monitor compliance schedules, (3) utilization of the automated Compliance Data System for managing compliance data, and (4) EPA enforcement actions to keep sources in compliance or on compliance schedules.

The States and EPA are in the process of completing the development of compliance schedules. Progress has been made in ensuring compliance by major point sources. As of December 31, 1973, EPA had issued notices of violation to some 82 facilities and abatement orders to 24 of these. In addition, some 930 letters requesting emissions data, other necessary information, or, appropriate action have been sent (Section 114, Clean Air Act). The Agency has made 600 inspections and 24 source tests to ascertain the compliance status of sources. The EPA objective is to have all point sources either in compliance or on an approved compliance schedule by June 30, 1974. However, the present degree of compliance is not satisfactory to EPA. This is primarily due to the inability of States and EPA to quickly focus massive efforts into plan enforcement.

Approximately 20,000 point sources are required to comply with SIP emission standards. Of roughly 12,000 point sources investigated by

States and EPA, 7600 are in compliance, 1200 are on approved compliance schedules and 1900 are not yet on schedule. Schedules for the 1600 remaining sources have been submitted by States to EPA and are being reviewed for approval.

It should be noted that the compliance status of sources in many facilities has not been verified by actual inspection or other investigations. Thus, EPA, in cooperation with the States, is initiating a major effort in compliance monitoring to specifically determine the compliance status of sources.

Compliance Schedule Tracking

The Office of Enforcement and General Counsel has developed, and has had in operation since June 1973, a computer system known as the Compliance Data System (CDS). The CDS is an enforcement management system designed to track compliance schedule status. At present, CDS is both expanding and refining the basic inventory of source and compliance information while evolving to provide faster and more versatile reporting capabilities.

The CDS master file, which is maintained with regular weekly updates by the Regions through computer terminals, included, as of January 23, 1974, about 7800 facilities with almost 27,400 related compliance schedule records of emissions point/pollutant combinations. To some extent, the degree of completeness of the master file reflects the amount of effort being devoted to system implementation in each Region.

STATE AND LOCAL RESOURCES

Basic Ordering Agreement Assistance

Contractual type assistance has aided the States (up to and including fiscal year 1973) in the preparation of SIPs and transportation control strategies, the collection of air monitoring and emission data for use in control strategy development, and the preparation of compliance schedules. In FY 1974, this support has been expanded to include assistance in SIP revisions and implementation, indirect source and 10-year maintenance studies, and significant deterioration plans. Candidate projects from the Regional Offices for FY 1974 totaled \$9,781,000. Sixty-seven of these projects are being funded, for an expenditure of \$2,684,000.

State Assignee Program

Since July 1, 1970, when the first persons were assigned, 275 State assignees have participated in the program. As of January 1974, there were 101 assignees on board, 98 assignees had converted to State or local control programs, 16 assignees had converted to Federal programs, and 60 assignees had resigned from the program.

Overall State and Local Manpower and Funds

Revised estimates (as of December 1973) received from the Regions indicate that by the end of FY 1975 approximately 9500 man-years and \$189 million will be required to accomplish the SIPs and revisions to the SIPs. The increase in resource needs is attributed primarily to transportation control plans and to plan revisions due to significant deterioration and maintenance of standards and indirect source review.

These estimates exceed the initial SIP estimated 1975 manpower requirements by 900 man-years and \$45 million. The current resource requirements exceed the 1973 man-years and funding levels by 3800 man-years and approximately \$75 million. EPA is currently reassessing the level of resource needs in non-Federal air pollution control agencies in light of the requirements mentioned above. Data collected from selected agencies are being analyzed and will be extrapolated to comprise nationwide estimates. The information will be available in late spring 1974.

SECTION 2 - NATIONAL ISSUES

IMPLEMENTATION OF CLEAN FUELS POLICY

In 1972, EPA completed an analysis that showed that the projected supplies of low-sulfur fuel and sulfur dioxide emission control equipment would be inadequate to meet the aggregated requirements placed upon stationary combustion sources by the sulfur emission limitations of the SIPs. These supply shortfalls would be most severe in the 20 States comprising EPA Regions III, IV, and V, where over 60 percent of the nation's combustion coal is consumed in electric power plants.

The EPA analysis showed that a substantial increase in acceptable coal supplies would be realized if the sulfur emission limits were revised upward where it could be shown by air quality modeling that the 1975 primary air quality standards would still be met. The Clean Fuels Policy (CFP), to encourage the optimum utilization of the limited supplies of low-sulfur fuels, was announced by EPA in November of 1972. Under this policy, the States were encouraged to revise their emission regulations to permit the continued burning of fuels from established sources provided the primary air quality standard would not be violated at least until attainment of primary standards was assured. This action would reduce the demand for low-sulfur fuels and control equipment in some locations, thereby increasing their availability in other areas where severe environmental problems required their use.

Current estimates by EPA project a requirement for 540 million tons of combustion coal in 1975, of which approximately 115 million tons is considered as Clean Fuels Policy Potential - that is, capable of being burned without exceeding the primary ambient air quality standards even though the resulting sulfur emissions would exceed SIP limitations.

Table 2-1 summarizes the State actions in EPA Regions III, IV, and V in response to the Clean Fuels Policy. The table also reports the level of technical assistance EPA is providing to the States.

The current energy shortage has placed an additional requirement on EPA to provide the results of air quality modeling studies. These studies are to aid in the selection of power plants that have an oil-to-coal firing reconvertability and that can convert with a minimum adverse environmental impact. These studies have been completed on 75 power plants, with a potential oil savings of 560,000 million barrels per day, in the northeastern states. Forty-six of these plants have been ranked according to their probable impact on air quality if converted from oil to coal burning. The conversion of many of these plants to coal burning would have an adverse impact on air quality.

MAINTENANCE OF STANDARDS/LAND USE CONTROLS (INDIRECT SOURCES)

As a result of the court order in Natural Resources Defense Council v. Ruckelshaus, EPA has developed regulations requiring that SIPs include procedures to review construction of "indirect sources" that would interfere with attainment and maintenance of the national standards.

The term "indirect sources" has been used by EPA to describe facilities which indirectly cause air pollution by substantially increasing traffic, e.g., shopping centers and sports arenas and other similar sources.

Table 2-1. CLEAN FUELS POLICY (CFP) ACTION SUMMARY

Area	Impact of CFP ^a	Anticipated date of State CFP regulation changes ^b	Variances	EPA support to state	
				Level ^a	Type
Region III					
Delaware	C	--	May use variance Law enforcement uses variances	C	-- ^d Modeling, consultation ^d
District of Columbia	C	--		C	
Maryland	C ^c	--		C	
Pennsylvania	C	Apr 74		B	
Virginia	C	--			
West Virginia	A	May 74		A	Consultation, modeling ^d
Region IV					
Alabama	A	May 74		A	Consultation, modeling, TVA ^e
Florida	C	--		C	SIP disapproved; consultation, modeling
Georgia	B	May 74		A	
Kentucky	A	-- ^f		A	
Mississippi	C	--		C	Consultation, TVA ^e
North Carolina	A ^c	--			
South Carolina	B	May 74		B	Modeling Consultation, modeling, TVA ^e
Tennessee	A	May 74		A	
Region V					
Illinois	C	--	Use variances for secondary standard	B	Modeling ^d
Indiana	A	May 74		A	Consultation, modeling
Michigan	A	Apr 74		B	Consultation, modeling
Minnesota	C	--		C	Consultation, modeling Modeling
Ohio	A	May 74		A	
Wisconsin	C	--		B	

^aA - significant, B - moderate, C - minimal.

^bDash indicates no action is anticipated.

^cGenerally already in compliance with SIP regulations.

^dPriority I and IA AQCR's involved.

^eConducted by Tennessee Valley Authority (TVA) with EPA support.

^fCFP status unknown.

The timetable for SIP actions involving indirect source review requirements is as follows:

1. March 2, 1973 - Advance notice of proposed rulemaking for an indirect source regulation and of disapproval of SIPs.
2. April 18, 1973 - Published in Federal Register Notice of Proposed Rulemaking¹ to change 40 CFR 51 to include provisions for review of indirect sources for purposes of maintenance of standards.
3. June 18, 1973 - Published regulations for maintenance of standards (forwarded to EPA Regional Offices).
4. August 15, 1973 - Due date for State submittal of implementation plan revisions.
5. October 30, 1973 - Approval or disapproval of plan revisions by EPA.
6. January 31, 1974 - Final promulgation of EPA regulations for disapproved SIPs.

For the last date, the court had previously set December 15, 1973, but changed it upon the petition of EPA for additional time in which to evaluate public comment. Fourteen SIP revisions have been submitted (see Table 3-3). For those States that have not submitted revisions and those revisions that are not approvable, EPA proposed regulations for indirect source review on October 30, 1973 (see Table 3-4).² EPA promulgated regulations for indirect sources on February 25, 1974.³

1. Federal Register, Volume 38, p.9599, April 18, 1973.
2. Federal Register, Volume 38, No. 208, October 30, 1973.
3. Federal Register, Volume 39, No. 38, February 25, 1974.

SIGNIFICANT DETERIORATION

On May 30, 1972, as the result of a suit filed by the Sierra Club, EPA was ordered by the District Court of the District of Columbia to disapprove all SIPs which "do not prevent significant deterioration of air quality" in currently clean areas and to promulgate new regulations that would prevent significant deterioration. The District Court order was appealed to the Court of Appeals where it was affirmed, and subsequently to the Supreme Court, which affirmed the decision by a tie vote.

As a result, all SIPs were disapproved on November 9, 1972, to the extent that they did not explicitly "prevent significant deterioration," and four alternative sets of regulations were proposed in the Federal Register of July 16, 1973.⁴

EPA solicited widespread public participation in the rulemaking activity because, despite the extensive litigation, there was no guidance available regarding what level of deterioration is "significant," nor what procedures should be implemented to prevent that level of deterioration from occurring. To this end, public hearings on the significant deterioration issue were held in Washington, D. C. (August 27-28, 1973); Atlanta (September 5-6, 1973); and Dallas, Denver and San Francisco (September 5-6, 1973). A 90-day period for public comment was completed in October. Over 450 comments were received during the public hearing and comment period. Main areas of emphasis were on: (1) requesting Congressional clarification of the issue, (2) the proposed definition

4. Federal Register, Volume 38, No. 135, July 16, 1973.

of "best available control technology" in the regulations, and (3) indication of a desire for maximum and local flexibility in interpretation of the regulations.

In addition, the Administrator met with governors or designees on January 11, 1974, to discuss in detail the State and Federal relationship in this issue. EPA held a similar meeting with representatives of city and county governments on January 29, 1974. The Administrator is also expected to discuss EPA's final decision on this issue with Congress prior to promulgation. No final date has been set for promulgation.

SUPPLEMENTARY CONTROL SYSTEMS

A major issue related to implementation plans involves the question of supplementary control systems (SCS) as an acceptable control strategy. SCS involve both the temporal variation of emission rate, based on expected meteorological conditions, to avoid high ground-level concentrations during periods of poor dispersion potential, and the use of tall stacks to lower ground-level impact. Early in September 1973, EPA proposed regulations and solicited public comment on them.⁵

SCS are considered less desirable than constant emission limitations and, as proposed, will be allowed only for large, remote existing sources of sulfur dioxide and only where constant emission reduction systems are not available to the source. Generally this restricts their use to non-ferrous smelters (after use of acid plant control systems) and rural coal-fired power plants that will not be able to install stack gas cleaning equipment nor find low-sulfur coal. The regulations also proposed many requirements for the design and operation of SCS.

5. Federal Register, Volume 38, No. 178, September 30, 1973.

EPA has published in the Federal Register a policy statement in the form of proposed regulations on tall stacks and the SCS proposal.⁶ The policy allows consideration of stack extensions only as a part of existing stacks. Additions to existing stacks up to the height called for by good engineering practice will be allowed.

COPPER SMELTERS

As a matter of background, on May 31, 1972, EPA disapproved SIPs for Arizona, New Mexico, Nevada, Utah, Idaho, and Montana because they did not submit adequate plans to control sulfur dioxide from copper smelters.⁷ Regulations for control of these sources to attain primary standards were proposed by EPA, and public hearings on the regulations were held during August, September, and October of 1972, at which time a number of substantial comments were received. Numerous court suits have been filed by the individual copper smelters against the EPA-proposed regulations.

Some of the important issues include the validity of the ambient air quality data upon which the proposed regulations were based, the accuracy of EPA's diffusion model analysis, and the allegation that EPA should have provided adjudicative hearings on the proposed regulations. The decision by the District Court of Colorado in the Anaconda case was overturned, thus resolving in EPA's favor the issues of whether or not EPA must file an environmental impact statement and hold adjudicative hearings. In addition, EPA has initiated an ambient air quality monitoring system within the vicinity of the smelters in

6. Federal Register, Volume 38, No. 178, September 1973.

7. Federal Register, Volume 37, p.10842, May 31, 1972.

order to obtain valid and representative data. These data will also be used to validate the diffusion model employed by EPA.

The major issue with the smelters involves the use of supplementary control systems. On September 14, 1973, EPA proposed regulations allowing nonferrous smelters and coal-fired power plants meeting certain requirements to employ SCS.⁸ In view of the comments received addressing these regulations, it does not appear that there will be any significant changes to the proposed SCS policy as it relates to smelters. Therefore, at this time, EPA is reevaluating State plans or proceeding with the promulgation of smelter regulations to attain both primary and secondary standards, employing SCS where appropriate.

Such a promulgation will satisfy the requirement of developing a plan for the secondary sulfur dioxide standard within 18 months from the initial plan approval or disapproval and the requirement for developing substitute regulations to attain and maintain the primary standards. Before proceeding with such a promulgation, it would be necessary to again propose the regulations for attainment of primary standards due to changes in air quality data and the SCS policy.

8. Federal Register, Volume 38, No. 178, September 14, 1973.

SECTION 3 - STATE IMPLEMENTATION PLAN PROGRESS

EPA ACTIONS

States were required to submit to EPA by January 31, 1972, their plans for attainment of national ambient air quality standards for six criteria pollutants (sulfur dioxide, particulate matter, carbon monoxide, photochemical oxidants, hydrocarbons, and nitrogen dioxide).

A priority classification system was established to categorize Air Quality Control Regions (AQCRs) according to the severity of the air pollution problem in each AQCR for purposes of SIP development and evaluation. The SIP requirements vary according to the priority classification in order that the time and resources to be expended in both plan development and carrying out the plan are commensurate with the air pollution problem. The classifications have been based on measured ambient air concentrations where known or, where not known, on modeling estimates of air quality in the area of maximum pollutant concentration.

AQCRs are classified as follows:¹

1. Priority I - ambient concentrations significantly above primary standards.

1. Federal Register, Volume 36, No. 158, p. 15486, August 14, 1971.

2. Priority Ia - ambient concentrations significantly above primary standards due to emissions from a single point source.
3. Priority II - ambient concentrations significantly above secondary standards.
4. Priority III - ambient concentrations at or below secondary standards.

Table 3-1 is a summary of the AQCR priority classifications for the various pollutants. It should be noted that 43 AQCRs initially classified Priority I or Ia for nitrogen dioxide were proposed

Table 3-1. SUMMARY OF AIR QUALITY CONTROL
REGION PRIORITY CLASSIFICATION

Pollutant	Total	Priority I	Priority Ia	Priority II	Priority III
Particulate matter	247	109	11	70	57
Sulfur dioxide	247	39	21	41	146
Carbon monoxide	247	29	--	--	218
Nitrogen dioxide ^a	247	4	--	--	243
Oxidant/hydrocarbon	247	54	--	--	193

^aAssuming reclassification is promulgated as proposed.

to be reclassified Priority III on June 8, 1973.² The proposed reclassification is a result of new air quality data, which show lower levels of nitrogen dioxide than those measured using the previous analytical reference method (Jacobs-Hochheiser).

A priority classification of AQCRs by pollutant is contained in EPA Publication 450/1-73-001.³

Plans were submitted by all 55 States (the 50 states plus the District of Columbia, Guam, American Samoa, Puerto Rico, and the Virgin Islands), and EPA approved or disapproved all portions of these plans. Table 3-2 shows the status of the 55 plans with respect to the need for EPA promulgation and the degree to which these promulgations have been made. It should be noted that the number of plans fully approved and with no regulatory disapprovals has dropped from 17 to 16 since the previous SIP progress report.⁴ The change in the approval/disapproval figures are the result of recent actions on compliance schedules.

Table 3-2 does not reflect plan disapprovals with respect to "significant deterioration" or maintenance of the national standards. Final determination on significant deterioration has not yet been made. Maintenance of national standards is discussed below.

The issue of maintenance of standards has been addressed in two ways: a source-by-source review of indirect sources, and long-range plans for areas likely to exceed standards in the future. On June 18, 1973, EPA promulgated regulations requiring States to submit by

2. Federal Register, Volume 38, No. 110, p. 15180, June 8, 1973.

3. The National Air Monitoring Program: Air Quality and Emissions Trends Annual Report, Volume I, EPA 450/1-73-001a, August 1973.

4. State Air Pollution Implementation Plan Progress Report, January 1-June 30, 1973. U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, Publication No. EPA 450/2-73-005, September 1973.

Table 3-2. STATUS OF STATE IMPLEMENTATION PLANS, SUMMARY

SIPs approved through State submittal	14
SIPs approved as submitted by States with exception of some nonregulatory deficiencies; not correctable by EPA promulgation	2 ^a
SIPs submitted by States and requiring EPA promulgation	39
SIPs with all regulatory deficiencies corrected by EPA promulgation	26
SIPs with all regulatory deficiencies not yet corrected (finalized) by EPA promulgation	13
Total plans	55

^aEPA delegated authority to release emissions data (regulatory provision) to South Dakota (Table 3-5).

March 18, 1974, a list of areas likely to violate national ambient air quality standards for any pollutant within 10 years.⁵ EPA will review and finalize these lists by June 18, 1974, following which the States must submit plans for assuring that such violations do not occur. These plans, due within 2 years from promulgation of the requirements, will be reviewed and approved by EPA much as the original SIPs were. This schedule is shown in Table 3-3.

The same promulgation requires States to set forth legally enforceable procedures for reviewing, on a source-by-source basis, all new or modified sources to determine if such construction or modification will violate any control strategy or will interfere with

5. Federal Register, Volume 38, No. 116, June 18, 1973.

Table 3-3. MAINTENANCE OF AIR QUALITY STANDARDS, ACTIVITY SCHEDULE

Phase	Activity	Responsible agency	1973 J J A S O N D	1974 J F M A M J J A S O N D	1975 J F M A M J J A S O N D
I	Promulgation of regulation Develop plan for indirect source review	EPA	6/18/73		
	Plan review: approval/ disapproval	States	-----		
	Plan promulgation	EPA	10/30/73		
II	Guidelines for designa- tion of problem areas	EPA	1/31/74		
	Designation of problem areas	EPA	12/20/73		
	Review/publication of list of problem areas	States	3/18/73		
III	Guidelines for analysis and development of 10-year plan	EPA	6/18/74		
	Testing of procedures for analysis/plan develop- ment	EPA	8/1/74		
	Analysis of problem areas/ development of 10-year plan/submital	EPA/ States			
	Review of submittal, approval/proposal/ promulgation	States		6/18/75	
		EPA			12/18/75

attainment or maintenance of any national air quality standard, either directly through emissions or indirectly through associated mobile source activities.

Table 3-4 shows the status of source review plans as of January 1974.

Table 3-5 displays the specific States (and in some cases AQCRs) having deficiencies in regulatory or nonregulatory provisions. EPA has the authority to propose or promulgate regulations to overcome States' regulatory deficiencies. EPA, as a matter of policy, will rescind its regulations when States enact adequate legislation or regulations. Table 3-5 also lists the proposals and promulgations to alleviate regulatory deficiencies and also indicates whether or not legal authority is possessed by the State or if legal authority has been delegated by EPA to the State. Sixteen States are deficient in legal authority for nonregulatory provisions (Table 3-5).

States with unapproved nonregulatory provisions are also listed in Table 3-5. It is noted that the nonregulatory deficiencies can be corrected only by State action, i.e., State submittal of additional information. The combination of the deficiencies of regulatory and nonregulatory provisions reflects the States' overall plan conformance to Federal Register⁶ requirements.

EXTENSIONS

Extensions for Attaining Primary Standards

The Clean Air Act⁷ provides for extensions of up to 2 years beyond the 3-year period prescribed for attainment of national primary ambient air quality standards in those AQCRs where needed

6. Federal Register, op cit 1.

7. Clean Air Amendments of 1970, Public Law 91 604, December 31, 1970.

Table 3-4. SUMMARY STATUS OF STATE ACTIVITY ON INDIRECT
SOURCE CONTROL REGULATIONS

EPA region	State plans submitted by January 1, 1974	Probable submittals mid-1974	Probable nonsubmittals
Region I	Connecticut Maine New Hampshire Vermont	Rhode Island Massachusetts	
Region II	New York	Virgin Islands New Jersey ^a Puerto Rico	
Region III	Virginia	Delaware District of Columbia Maryland Pennsylvania W. Virginia	
Region IV	Florida Alabama Kentucky North Carolina	Georgia	South Carolina ^a Tennessee ^a Mississippi ^a
Region V		Illinois Indiana Michigan ^a Minnesota Ohio Wisconsin	
Region VI			Arkansas Louisiana Oklahoma ^a New Mexico ^a Texas ^a
Region VII	Nebraska		Iowa ^a Kansas ^a Missouri ^a
Region VIII		Colorado	Montana ^a North Dakota ^a South Dakota ^a Utah ^a Wyoming ^a
Region IX	Guam	American Samoa Nevada California	Arizona Hawaii
Region X	Idaho Washington Oregon		Alaska ^a
Totals	15	21	19

^aStates without legal authority to regulate indirect sources.

Table 3-5. STATUS OF STATE IMPLEMENTATION PLANS^a

EPA Region/State/AQCR	Public availability of data	Require source record keeping and reporting	Review of new sources and modifications	Compliance schedules	Transportation control plans	Emission limitations				Air quality surveillance	Periodic testing and inspection	Emergency episode plan	Resources	Intergovernmental cooperation
						SO ₂	TSP	HC	NO ₂					
Region I														
Massachusetts	X(NLA)	X		X										
Metropolitan Boston					X									
Hartford-New Haven-Springfield Interstate					X									
Rhode Island	NLA	X(NLA)		X										
Vermont	X(NLA)	X												
New Hampshire				X										
Region II														
New Jersey														
New Jersey-New York-Connecticut Interstate				X	X			X						D
Metropolitan Philadelphia Interstate				X	X			X						
New York														
Hudson Valley Intrastate			0	0		0								
Genesee-Finger Lakes Intrastate			0	0		0								
Southern Tier West Intrastate			0	0		0								
New York-New Jersey-Connecticut Interstate			0	0					0					
Central New York Intrastate			0	0		0								
Virgin Islands			X											
Region III														
District of Columbia				X	X(NLA)								D	D
Maryland				X	NLA						D		D	D
Metropolitan Baltimore Intrastate					X									
National Capital Interstate					X									
Pennsylvania					X					D	D		D	D
Southwest Pennsylvania Intrastate					X									
Metropolitan Philadelphia Interstate					X									
Virginia					NLA								D	D
National Capital Interstate					X									
West Virginia				X										
Region IV														
Kentucky	DLA			0										
South Carolina	DLA	DLA		X						NLA				
Tennessee				X								D(NLA)		
Region V														
Illinois														
Metropolitan Chicago Interstate				X	X	0	0							
Indiana										D				
Metropolitan Indianapolis Interstate			X		0	D	D							
Chicago						D	D							
Michigan			X	X										
Metropolitan Detroit-Port Huron Intrastate				X										
South Central Michigan Intrastate				X										
Metropolitan Toledo Intrastate				X										
Minnesota	X													
Ohio														
Cincinnati and Hamilton County					X	D	0							
Northwest Pennsylvania Youngstown (Pa.)							0							
Greater Metropolitan Cleveland							0							
Steubenville-Weirton-Wheeling (W.Va.)							0							
Wisconsin	X(NLA)													

Table 3-5 (continued). STATUS OF STATE IMPLEMENTATION PLANS^a

EPA Region/State/AQCR	Public availability of data	Require source record keeping and reporting	Review of new sources and modifications	Compliance schedules	Transportation control plans	Emission limitations				Air quality surveillance	Periodic testing and inspection	Emergency episode plan	Resources	Interagency cooperation
						SO ₂	TSP	HC	NO ₂					
Region VI														
Arkansas														
Louisiana														
New Mexico														
Four Corners Interstate				X										
Texas														
El Paso-Las Cruces-Alamogordo Interstate				X	X									
Austin-Waco Intrastate				X	X									
Metropolitan Houston-Galveston Intrastate				X	X									
Metropolitan Dallas-Fort Worth Intrastate				X	X									
Metropolitan San Antonio Intrastate				X	X									
Southern Louisiana-Southeast Texas (La.)					D									
Corpus Christi-Victoria														
Region VII														
Iowa	X(NLA)	X		X										
Kansas	X(NLA)		X	X	NLA									
Missouri	X(NLA)				NLA									
Nebraska	X	X	X	X										
Jefferson, Gage, and Thayer Counties				X			X							
Region VIII														
South Dakota	DLA													
Colorado					X									
Montana														
Helena Intrastate				O		O								
Utah	X(NLA)													
Four Corners Interstate				X	X		X							
Wasatch Front Intrastate			X	X	X	O	X		O					
Wyoming										D	NLA			
Region IX														
Arizona		X												
Pima County APCD			X											
Phoenix-Tucson Intrastate				X	X	O	X							
Arizona-New Mexico Southern Border Interstate				O		O								
Four Corners Interstate				X		X								
California	X(NLA)	X	X	X										
Metropolitan Los Angeles Intrastate				X			O	X	O			D(NLA)	D	
Sacramento Valley Intrastate					X			X						
San Diego Intrastate				X	X			X						
San Francisco Intrastate				X	X			X						
San Joaquin Valley Intrastate				X	X		O	X						
Southeast Desert Intrastate							O	O						
Nevada	X	X	X	O										
Region X														
Alaska				X										
Northern Alaska Intrastate					X									
Idaho	NLA			X										
Eastern Washington-Northern Idaho Interstate				O		O								
Oregon				X	O									
Washington				X	NLA					D				
Puget Sound Intrastate					X									
Eastern Washington-Northern Idaho					X									

^aX = promulgated; O = proposed; D = deficient; NLA = no legal authority; DLA = legal authority delegated by EPA.

technology or other alternatives either are not available or will not be available soon enough to attain the primary standards.

At present, there are 16 States involving 28 AQCRs with extensions for attainment of primary standards (Table 3-6). Of these States, 14 required EPA promulgation; and an extension was provided as part of the control strategy.

Extensions for Submitting Plans for Attaining Secondary Standards

Pursuant to Section 110(b) of the Clean Air Act, EPA has granted or provided 18-month extensions for the development of control strategies for achieving secondary standards for total suspended particulates and/or sulfur dioxide. These extensions are summarized in Table 3-6. These were granted on the basis of an apparent lack of reasonably available control technology or equipment, or, in the case of some plans for particulate matter, inadequate data on which to base the control strategy.

Thirteen States covering 26 AQCRs were given extensions for the particulate standard. Of these, plans for six States covering 14 AQCRs have been submitted to EPA. A plan for one State involving 2 AQCRs has been submitted, and EPA has made it available for public comment. The remaining plans for six States and 10 AQCRs are under development by EPA. As of February 15, 1974, none has been approved or disapproved.

Twelve states covering 20 AQCRs were given extensions for the sulfur dioxide standard. On September 14, 1973, after the 18-month extension period was ended, before any plans for these AQCRs were received, the standard was changed, and an additional 4 months (until January 14, 1974)

was allowed for submittal of these plans. To date, plans for three States covering 5 AQCRs have been submitted to EPA; plans for nine States involving 15 AQCRs are under development by EPA. None has been made available for public comment nor approved or disapproved by EPA.

EPA is currently developing regulations to achieve the secondary standards for both total suspended particulate and sulfur dioxide in these AQCRs where extensions were granted and no plan was submitted. This includes specific regulations for sulfur dioxide emissions from nonferrous smelters for six States (Arizona, New Mexico, Utah, Idaho, Montana, and Nevada) where extensions were not requested by the States but were provided by EPA.

TRANSPORTATION CONTROL PLANS

Eighteen States were required to submit Transportation Control Plans (TCPs) for 32 AQCRs to achieve compliance with national ambient air quality standards for carbon monoxide and photochemical oxidants (hydrocarbons). The EPA has reviewed the transportation plans thus far submitted by these States and commented on their deficiencies.⁸ The status of EPA approved or promulgated plans as of February 11, 1974, is shown in Table 3-7.

In Birmingham and Mobile, Alabama; Kansas City, Kansas; Kansas City, Missouri; Baton Rouge/Lake Charles, Louisiana; Dayton and Toledo, Ohio; Syracuse, New York; and Corpus Christi, Texas, it was determined that both additional stationary source control and the Federal Motor Vehicle Emissions Control Program (FMVECP)⁹ would be needed to attain

8. Annotated in Federal Register, Volume 38, No. 213, November 6, 1973.
9. Clean Air Amendments of 1970, Public Law 91 604, December 31, 1970.

Table 3-6. STATUS OF EXTENSIONS

EPA Region/State/AQCR	Primary standards							Secondary standards (18-month extensions)			
	State plan involved	AQCR involved	EPA promulgation required	Pollutant involved and attainment date				State plan involved	AQCR involved	Pollutant involved	
				O _x	CO	TSP	SO ₂			TSP	SO ₂
Region I											
Connecticut								•			
New Jersey-New York- Connecticut									•	•	
Hartford-New Haven- Springfield									•	•	
Massachusetts								•			
Metropolitan Boston									•	•	•
Region II											
New Jersey	•		Yes					•			
Metropolitan Philadelphia		•	Yes	5-77	5-77				•	•	•
New Jersey-New York- Connecticut		•	Yes	5-77	8-76				•	•	•
New York	•		No					•			
Central New York Intrastate									•	•	
New Jersey-New York- Connecticut		•		12-76	12-76	7-77			•	•	•
Niagra Frontier		•				7-77	7-77		•	•	•
Region III											
District of Columbia	•	•	Yes	5-77	5-77						
Maryland	•							•			
Metropolitan Baltimore									•		•
National Capitol		•	Yes	5-77	5-77						
Pennsylvania								•			
Philadelphia Intrastate									•	•	•
Southwest Pennsylvania									•	•	•
Virginia	•							•			
National Capitol		•		5-77	5-77						
State Capitol									•	•	
Region IV											
Kentucky	•		No								
Louisville		•					7-77				
Region V											
Indiana								•			
Indianapolis									•	•	
Chicago Interstate									•	•	•
Ohio								•			
Metropolitan Cleveland									•	•	
Northwestern Pennsylvania- Youngstown									•	•	
Steubenville-Wheeling									•	•	
Region VI											
New Mexico	•		Yes					•			
Arizona-New Mexico Border									•		•
Four Corners		•					3-76				
Texas	•		Yes								
Dallas-Ft. Worth		•		5-76							
Houston-Galveston		•		5-77							
Metropolitan San Antonio		•		5-77							

Table 3-6 (continued). STATUS OF EXTENSIONS

EPA Region/State/AQCR	Primary standards							Secondary standards (18-month extensions)			
	State plan involved	AQCR involved	EPA promulgation required	Pollutant involved and attainment date				State plan involved	AQCR involved	Pollutant involved	
				O _x	CO	TSP	SO ₂			TSP	SO ₂
Region VIII											
Colorado	•		Yes					•			
Denver		•		5-77	5-77				•	•	
San Isabel									•	•	
Pawnee									•	•	
Montana	•		Yes					•			
Helena		•					7-77		•		•
Utah	•		Yes					•			
Four Corners		•					3-76		•		•
Wasatch		•			8-76		7-77		•		•
Region IX											
Arizona	•		Yes					•			
Arizona-New Mexico Border		•					7-77		•		•
Four Corners		•					3-76		•		•
Phoenix-Tuscon		•			5-77		7-77		•		•
California	•		Yes					•			
Metropolitan Los Angeles		•		5-77	5-77				•	•	
Sacramento		•		5-77	5-77						
San Diego		•		5-77	5-77						
San Joaquin		•		5-77	5-77						
Southeast Desert		•		5-77	5-77						
Hawaii								•			
Hawaii									•	•	
Nevada								•			
Nevada									•		•
Region X											
Alaska	•		Yes					•			
Cook Inlet									•	•	
North Alaska		•		5-77					•	•	
Idaho	•		Yes					•			
East Washington		•					7-77		•	•	•
East Idaho									•	•	
Idaho Intrastate									•	•	
Boise									•	•	
Washington	•		Yes								
North Idaho		•			5-76						
Puget Sound		•			5-76						

Table 3-7. SUMMARY OF TRANSPORTATION CONTROL PLANS

EPA Region/ State/AQCR		Acceptable State portion (S) or EPA promulgation (E)																								
		CO	O ₃ ^a	Reduction required, %	Inspection/ maintenance	Catalytic retrofit	Air bleed retrofit	VSAD retrofit	High altitude modifications	EGR/air bleed	Gaseous fuel	Traffic flow improvements	Parking restrictions	Mass transit improvements	Additional stationary source controls	M/V excl. area	Bus/carpool locator	Gasoline limitations	Motorcycle emission regs.	Idling limitations	Bicycle lanes	Bus and carpool lanes	Mass transit incen- tives for employees	Miscellaneous measures	Extension granted, months	
Region I																										
Massachusetts Metropolitan Boston Interstate		59	68	E	E	E	E					E		E			E					E		--b	24(0 _x)	
Hartford-New Haven- Springfield Inter- state		57	16	E							E	E			E	E									--b	14
Region II																										
New Jersey New York, New Jersey, Conn. Interstate (Newark)		47	60	S/E	E				E			E		E		E	E					E	E	E ^c	14(CO) 24(0 _x)	
Metropolitan Phil- adelphia Interstate		44	45	S/E	E				E			E		E	E ^d	E	E					E	E		14(CO) 24(0 _x)	
New York New York, New Jersey, Conn.		78	68	S	S						S	S			S									--e	24(HC) 19(CO)	
Rochester		--	45	S										S											0	
Region III																										
District of Columbia National Capital Interstate (D. C., Va., Md.)		55	60	S/E	E ^f		E		E			S/E	S/E	S/E	S	E					E	S/E	S ^g	S ^h	24(0 _x)	
Maryland Metropolitan Balti- more Interstate (Baltimore)		57	62	E	E ⁱ		E		E ^j		E	E		S/E	E	S/E					E	E	E		24(0 _x)	
Pennsylvania Metropolitan Phil- adelphia Interstate (Philadelphia)		55	53	S/E		S/E					E	S/E		S	E	S					E	E	E	--k	12(CO)	
Southwest Pennsylv- ania Interstate (Pittsburgh)		57	48	E		E					E	E	E	E	E	S					E	E		--k	24(CO) 13(0 _x)	
Region V																										
Illinois Metropolitan Chicago Interstate (Chicago)		50	--	E							E	E													0	
Indiana Metropolitan Indian- apolis (EPA Proposal)		25	38	E			E							E		E						E			13(0 _x)	
Minnesota Minneapolis-St. Paul		40	--								S	S	S												0	
Ohio Metropolitan Cincin- nati Interstate		--	43	E										S											0	
Region VI																										
Texas Austin-Waco		--	27																						0	
Corpus Christi		--	56																					--k	0	
Metropolitan Houston- Galveston		--	75	E			E				E		E	E	E ^o			--n				E	E	--p	24(0 _x)	

Table 3-7 (continued). SUMMARY OF TRANSPORTATION CONTROL PLANS

		Acceptable State portion (S) or EPA promulgation (E)																			
EPA Region/ State/AQCR	CO	Reduction required, %	Inspection/ maintenance	Catalytic retrofit	Air bleed retrofit	VSAD retrofit	High altitude modifications	EGR/air bleed	Gaseous fuel	Traffic flow improvements	Parking restrictions	Mass transit improvements	Additional stationary source controls w/ excl. area	Bus/carpool locator	Gasoline limitations	Motorcycle emission regg. limitations	Bicycle lanes	Bus and carpool lanes	Mass transit incen- tives for employees	Miscellaneous measures	Extension granted, months
		O ₃ ^a																			
Metropolitan Dallas- Ft. Worth	--	33											E	E				E	E	--k	0
Metropolitan San Antonio	--	45	E										E	E				E	E	--k	24(0 _x)
El Paso-Las Cruces- Alamogordo Inter- state	--	34											E							--k	0
Region VIII																					
Colorado Metropolitan Denver	64	56	S		S		S			S	S	S	E		E			S			24(CO) 24(0 _x)
Utah Wasatch Front Inter- state (Salt Lake City)	59	--	S/E		S/E		S/E				S/E		E						--m		14(CO)
Region IX																					
Arizona Phoenix-Tucson Intra- state (Phoenix- Tucson)	66	33	S/E	S/E	S/E			S/E	S/E	E		S	S/E	S				E	--p		24(CO)
California San Francisco Bay Area	37	78	S/E	E		S				E	E	S/E	E	E ^o	E			E	E	--b	24(0 _x)
Metropolitan Los Angeles	78	87	S/E	E		S				S/E	E	S/E	E	E ^o	E			E	E	--b	24(0 _x)
San Diego	50	75	S/E	E		S				S/E	E	S/E	E	E ^o	E			E	E	--b	24(0 _x)
Sacramento Valley	59	67	S/E	E		E					E	E	E	E ^o	E			E	E		24(0 _x)
San Joaquin Valley	40	67	S/E	E		E					E	E	E	E	E			E			24(0 _x)
Southeastern Desert	25	79	--q																		24(0 _x)
Region X																					
Alaska Northern Alaska In- trastate Region (Fairbanks)	66	--	E	E	E		E		E	E			E			E					24(CO)
Oregon Portland Interstate	60	43	S							S	S	S									12
Washington Puget Sound Intra- state (Seattle)	55	20	S/E		E		E		S/E	S/E	S/E		E						--m		12(CO)
Eastern Washington- Northern Idaho Interstate (Spokane)	50	--	S/E		E		E			S/E	S/E		E				E		--m		12(CO)

^aPercent reduction = (oxidant reading - oxidant standard)/oxidant reading.

^bPricing policies (E).

^cDelivery prohibited.

^dTrenton.

^eTaxi ban, bridge tolls.

^fFleet.

^gAircraft and taxi control.

^hParking surcharge

ⁱOn light- and medium-duty vehicles.

^jAir/fuel control retrofit on light-, medium-, and heavy-duty vehicles.

^kAircraft controls.

^lComplete I-35.

^mFringe parking and transit.

ⁿOff-highway user controls.

^o1977.

^pEmployee carpool incentives.

^qDepends on control for Los Angeles.

the air quality standards. In all other cases, plans only had to take the FMVECP into account, and these consisted of two basic types, (1) inspection/maintenance, and (2) retrofit of vehicles now in use to reduce emissions per mile and a series of steps to reduce vehicular miles of travel by carpooling and use of mass transit.

Hearings and other public airings of TCPs have brought a variety of reactions. Parking restrictions have been opposed by merchant groups, motorcycle bans have been opposed by manufacturers, and almost universal opposition arose to gasoline limitations and excessive vehicular travel reductions. In some highly automobile-dependent areas, such decisions may well be subject to review before final compliance dates in 1977. On the other hand, mass transit programs and carpool incentives drew positive reactions. The public responded unfavorably, however, to parking surcharge regulations and provisions for review of all new parking facilities over a specified size limit. Accordingly, the Administrator published appropriate notice in the Federal Register¹⁰ withdrawing all parking surcharges imposed by the EPA and postponed until January 1, 1975, regulations providing for review of all new parking facilities.

Delays in the projected availability of the necessary hardware for implementing gasoline vapor control strategies at motor vehicle service stations have postponed the estimated compliance date for these strategies until June 1, 1974.

Compliance dates for certain other TCPs published in the Federal Register are being adjusted to meet requests by appropriate State authorities.

10. Federal Register, Volume 39, p. 1848, January 15, 1974.

SECTION 4 - PLAN REVISION MANAGEMENT SYSTEM

BACKGROUND

As discussed in the previous SIP progress report,¹ one important issue facing EPA is whether the approved SIP control strategies will attain the national ambient air quality standards within the time frame prescribed by the Clean Air Act.² In response to this problem, the Office of Air Quality Planning and Standards (OAQPS), EPA, developed a Plan Revision Management System (PRMS) to identify Air Quality Control Regions (AQCRs) with "possible deficiencies" that may need a plan revision. The PRMS will identify possible deficiencies by comparing the measured air quality values at each monitoring site within an AQCR with projected emissions/air quality values based on applicable SIP regulations, growth, transportation control plans, and the interim automotive emission standards to determine if adequate progress has been made toward attainment of the standards.

OPERATION OF THE SYSTEM

The system is designed to combine and utilize information contained within SAROAD (air quality), NEDS (source emissions), and CDS

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1. State Air Pollution Implementation Plan Progress Report, January 1 to June 30, 1973. U.S. Environmental Protection Agency, Research Triangle Park, North Carolina. EPA-450/2-73-005, September 1973.
 2. Clean Air Amendments of 1970, Public Law 91 604, December 31, 1970.

(enforcement and compliance). Currently available data from all of these systems are used to project the air quality levels that can be expected from enforcement of the regulations submitted as part of the SIP. From this information, a projected emission/air quality curve is developed for each AQCR under study. As additional ambient air quality data are submitted (as required by 40 CFR 51.7),³ they will be entered into the SAROAD system. PRMS will analyze these data by comparing them to the projected air quality values to determine if adequate progress has been made. In each case where measured levels exceed projected levels (allowing for statistical variation), the AQCR will be flagged as having a "possible deficiency." Since many factors influence air quality measurements, it is not possible to state conclusively that a flagged AQCR has an adequate SIP. The system, by comparing the observed air quality to the predicted air quality, can determine a priority list of monitoring sites that may warrant further review. Thus, PRMS provides a management tool to identify those areas that appear to have a deficient SIP.

In addition to providing a management tool for identifying AQCRs that have possible deficiencies the PRMS can also be used to identify AQCRs or portions of AQCRs whose air quality has significantly deteriorated. No action has been taken in this report relative to air quality deterioration since the issue (significant deterioration) has not been resolved.

3. Federal Register, Volume 38, No. 149, p. 20832, August 3, 1973.

To date, the PRMS analysis has been expanded to include the 67 AQCRs listed in Table 4-1. Additionally, the PRMS has been expanded

Table 4-1. AQCRs ANALYZED IN PRMS

Region I	Region V
Hartford-New Haven-Springfield	Metropolitan Chicago
New Jersey-New York-Connecticut ^a	Metropolitan St. Louis ^a
Metropolitan Boston	Paducah-Cairo ^a
Metropolitan Providence	Louisville ^a
Merimac Valley-Southern NH	Metropolitan Cincinnati ^a
Region II	Metropolitan Indianapolis
New Jersey-New York-Connecticut ^a	Wabash Valley
Metropolitan Philadelphia ^a	Metropolitan Detroit-Port Huron
Northeast Pa-Upper Del Valley	Minneapolis-St. Paul
Central New York	Dayton
Genessee-Finger Lakes	Greater Metropolitan Cleveland
Hudson Valley	Metropolitan Columbus
Niagara Frontier	Northwest Pa-Youngstown ^a
New Jersey	Southeast Wisconsin
Region III	Region VI
Metropolitan Philadelphia ^a	Central Arkansas
National Capital	Shreveport-Texarkana-Tyler
Metropolitan Baltimore	Southern La-Southeastern Texas
Northeast Pa-Upper Del Valley	Central Oklahoma
Northwest Pa-Youngstown ^a	Northeast Oklahoma
Central Pennsylvania	Metropolitan Houston-Galveston
South Central Pennsylvania	El Paso-Las Cruces-Alamogordo
Southwestern Pennsylvania	Region VII
Central Virginia	Metropolitan St. Louis ^a
Hampton Roads	Metro Omaha-Council Bluffs
Kanawha Valley	Metropolitan Kansas City
Southern West Virginia	Nebraska
E. Tenn-Southwestern Virginia ^a	Region VIII
Region IV	Metropolitan Denver
Metropolitan Birmingham	San Isabel
Mobile-Pensacola-Panama City	Wasatch Front
Jacksonville-Brunswick	Region IX
West Central Florida	Phoenix-Tucson
Augusta-Aiken	Metropolitan Los Angeles
Chattanooga	San Diego
Metropolitan Atlanta	San Francisco
Paducah-Cairo ^a	Hawaii
Louisville ^a	Region X
Metropolitan Cincinnati ^a	Eastern Wash-Northern Idaho
Metropolitan Charlotte	Portland
Charleston	Puget Sound
E Tenn-Southwestern Va. ^a	
Middle Tennessee	

^aInteragency AQCR.

from the analysis of annual total suspended particulate matter and sulfur dioxide standards to analysis of all current national ambient air quality standards except that for nitrogen dioxide. The standards considered in the PRMS analysis are given in Table 4-2. No PRMS

Table 4-2. NATIONAL AMBIENT AIR QUALITY STANDARDS FOR PRMS ANALYSIS

Pollutant	Standard			
	Primary		Secondary	
	Averaging time	Concentration	Averaging time	Concentration
Total suspended particulate (TSP), $\mu\text{g}/\text{m}^3$	Annual 24 hours	75 260	Annual 24 hours	60 150
Sulfur dioxide (SO_2), $\mu\text{g}/\text{m}^3$	Annual 24 hours	80 365	3 hours	1300
Carbon monoxide (CO), mg/m^3	8 hours 1 hour	10 40	8 hours 1 hour	10 40
Total oxidants (O_x), $\mu\text{g}/\text{m}^3$	1 hour	160	1 hour	160

analysis for nitrogen dioxide was performed for any of the 67 AQCRs due to the proposed changes in the reference measurement method discussed in 40 CRF 50.⁴

4. Federal Register, Volume 38, No. 110, p. 15178, June 8, 1973.

Although the Phoenix-Tucson, Eastern Washington-Northern Idaho, El Paso-Las Cruces-Alamogordo, and Wasatch Front AQCRs were included in this report, the projected air quality curves for particulates and sulfur dioxide did not consider the impact of smelter regulations and fugitive dust regulations that are to be proposed by EPA (discussed in Section 2). Thus, any possible deficiencies identified for these AQCRs and associated with these emissions should be corrected by the implementation of the smelter and fugitive dust regulations.

ACTION PROCEDURES

When a possible deficiency is identified, OAQPS notifies the appropriate Regional Office (as discussed in the OAQPS guideline document),⁵ which will then be responsible for investigating the special details of the situation and determining the validity of the data and the magnitude of any problems. This should be done in cooperation with the respective State and local agencies. Such an investigation should include a determination of the validity of the data in question as well as a review of the effectiveness of the implementation plan control strategy. This investigation should include the following actions, as appropriate.

1. Data review actions:

- a. Review and certification (if possible) of the data.
- b. Review of meteorological conditions associated with sampling period to determine if abnormal conditions could have affected air quality levels.

5. Guidelines for Determining the Needs for Plan Revisions to the Control Strategy Portion of the Approved State Implementation Plans. CPDD, OAQPS, Environmental Protection Agency, Research Triangle Park, N. C. QAQPS No. 1.2-011. November 30, 1973 (draft).

- c. Site inspection to determine if monitor is properly located.
 - d. Site inspection to determine if site location is source oriented. In this case, a unique projected curve might be required for the site to facilitate analysis of the data.
 - e. Development of a more detailed projected curve for the entire AQCR.
2. Program actions:
- a. Review of compliance schedules for the AQCR to determine if any sources have failed to meet any scheduled milestones or final compliance dates.
 - b. Notification of the State that a more effective implementation of the new source review procedures is needed to restrict growth in certain areas.
 - c. Determination by special study of the cause of the present air quality problem.
3. Legal actions:
- a. EPA/State enforcement action.
 - b. SIP revision. The Regional Office should notify the State of the need for the revision.
 - c. The State's plan revision has not been submitted or approved and work has been initiated by EPA to develop the necessary plan revisions.

The above action procedures have been revised since the previous SIP progress report⁶ based upon additional information and comments received on the OAQPS Guidelines.⁷

6. State Air Pollution Implementation Plan Progress Report, op cit 1.
7. OAQPS No. 1.2-011, op cit 5.

To assist the Regional Offices with their review, OAQPS will provide each region with detailed copies of the individual PRMS site reviews for each monitoring site that has been identified as having a possible deficiency within 60 days after the end of each semiannual reporting period.

To date, some data review actions have been initiated by the Regional Offices to determine the cause of the identified problems in the previous SIP progress report, which covered 17 AQCRs. Additional investigations will be conducted as additional AQCRs are analyzed and reviewed.

PRMS ANALYTICAL RESULTS

The following discussion presents a short generalized summary of the PRMS analysis of the 67 AQCRs to date. Table 4-1 provides a list of the AQCRs that are currently in the PRMS by Regional Offices. A supporting document has been prepared by OAQPS that contains the detailed summary, regional maps, and important individual site reviews for each AQCR analyzed. This supporting document is available from OAQPS upon request.

Several important facts should be considered when reviewing any results of the PRMS. First, the PRMS does not attempt to provide the last or final word on the status of any AQCR. It is one tool that can be used by the Regional Offices to assist them in the task of determining the adequacy of the existing SIP. Regional Office personnel who have day-to-day contact with the State and local agencies and are aware of the many unique problems associated with an AQCR can provide the best analysis of an AQCR. However, the PRMS can provide an indication of

how the AQCR is progressing toward attainment of the air quality standards based upon the air quality data available from SAROAD. Thus, all "possible deficiencies" are just that, "possible." That is, they require some further investigation by those aware of any unique situations within the AQCR to determine the severity of the problem and what type of corrective actions are required.

Second, because the system considers the applicable State and Federal regulations, transportation control plans, and the Federal motor vehicle control program in the development of the projected emission/air quality curve, an AQCR will not be flagged if the observed air quality is following the predicted path even though the air quality is considerably above the applicable standard.

If no possible deficiencies are identified or adequate progress is noted, it does not necessarily mean that the AQCR has attained the standard nor does it necessarily mean that any relaxation should take place in the implementation of the control programs outlined in the SIP. The projected air quality curve is based on the assumption that the local, State, or Federal agencies will continue implementing their regulations as prescribed. If this is accomplished, the air quality data should reflect this enforcement by following the projected curve. Thus, adequate progress indicates that the observed air quality data are following the projected curve at this time and it appears that the standards will be attained within the prescribed time frame. However, the AQCR should remain under surveillance and all current program activities associated with the AQCR, e.g., evaluation of the monitoring sites locations, assurance of source compliance, etc., should continue.

Third, the PRMS can only analyze the data currently within the SAROAD system. Therefore, the analysis, in a number of cases, may be less than current because of the incomplete implementation of the quarterly reporting requirements for air quality data at this time. However, as more States begin to implement the reporting requirements, the system will be able to provide a more up-to-date analysis of the AQCR and its progress toward attainment of the standards. It is imperative to have the data in a timely fashion so that the analysis is current and not a review of past history.

Fourth, it should also be noted that many AQCRs have less than the minimum number of sites required in the SIP reporting sufficient data for which any analysis can be performed. This is especially true for sulfur dioxide, carbon monoxide and oxidants. Thus, for many of the 67 AQCRs, the analysis for those pollutants may not be conclusive until at least the minimum number of required sites are reporting enough data for analysis and review. Consideration should be given to the number of sites for which the analysis was performed compared to the minimum number of sites required by the SIP before any conclusions are made concerning the progress an AQCR is making. Many AQCRs that at this time appear to be making adequate progress based on less than the minimum number of monitors required may have severe SIP deficiencies when the data from all the sites are available in sufficient quantity for review.

A comparison of the initial analysis for the 17 AQCRs to the current analysis indicates that, in general, States are submitting more aerometric data, thus providing a larger air quality data base for

review. In some cases, the increased data base allowed for the identification of some additional possible deficiencies that were not evident in the initial analysis.

The results from the current analysis of 67 AQCRs indicated four principal types of problems: (1) limited data base, (2) localized problem, (3) general problem, and (4) increasing pollutant concentrations.

The AQCRs with a limited data base resulted from having less than the minimum number of sites required by the SIP. This was not a major problem for particulate matter as only 8 of the 67 AQCRs had less than the minimum number of sites currently reporting sufficient data for analysis. However, this was not the case for sulfur dioxide; 32 of the 67 AQCRs had less than the minimum number of monitoring sites reporting sufficient data for analysis. Similarly, 14 of the 25 AQCRs that were required to have carbon monoxide instruments had less than the minimum number of sites required, and 18 of the 36 AQCRs that were required to have oxidant instruments had less than the minimum number of sites required reporting sufficient data for analysis.

Possible deficiencies associated with total suspended particulates were noted in 51 of the 67 AQCRs analyzed. Some of these deficiencies appear to be local in nature since the remainder of the AQCR appears to be progressing as predicted. In addition, 65 of the 67 AQCRs have particulate concentrations above the national ambient air quality standard.

Only 5 of the 67 AQCRs had possible deficiencies relative to sulfur dioxide, and 9 AQCRs had values above the standards. As

mentioned previously, however, almost 50 percent of the AQCRs analyzed had less than the minimum number of sites required, and any general conclusions on the status of sulfur dioxide would not be completely accurate at this time.

Possible carbon monoxide deficiencies were noted in 13 AQCRs and oxidant deficiencies in 8. However, 29^{*} of the AQCRs have values that are currently above the national standards for carbon monoxide. Nineteen (19) of the 36 AQCRs required to have oxidant instruments were above the standard. Again, it should be noted that almost 50 percent of the AQCRs required to have carbon monoxide and oxidant monitors had less than the minimum number of sites with sufficient data for analysis. Additionally, four AQCRs that have a carbon monoxide instrument where no current SIP requirement exists have recorded values in excess of the standard.⁸

Two AQCRs have been noted as having possible deficiencies throughout the AQCR, and further study should be initiated to determine the real extent of the problem.

To date, 8 AQCRs have reported pollutant concentrations that have increased over the past years. This problem appears to be local in nature as only one or two sites in these AQCRs have shown increases. This problem relates primarily to particulate concentrations; however, in a few areas, sulfur dioxide levels have also increased slightly.

In general, the PRMS analysis indicates that in most AQCRs adequate progress appears to be being made for most sites; however,

8. Although only 25 of the 67 AQCRs required CO monitors, an additional 4 AQCRs had data; thus, the 29.

no relaxation of any of the current ongoing programs should take place. The possible deficiencies should be reviewed to determine their cause and possible solution for that area of the AQCR where the deficiency was noted. The status of sulfur dioxide, carbon monoxide, and oxidants will require additional data to really assess the situation and determine if possible deficiencies exist. However, for those areas where a deficiency was noted, some work should begin to investigate the extent of the problem.

SECTION 5 - ENFORCEMENT OF STATE IMPLEMENTATION PLANS

In order to implement the SIPs, the focus of Federal and State activities needs to shift to ensuring compliance with approved emission limitations through vigorous enforcement programs. The process of ensuring compliance with the emission requirements in SIPs is based on the accomplishment of three major tasks:

1. Ensuring that affected sources are committed to a compliance schedule containing increments of progress.
2. Ensuring that the increments of progress in the compliance schedule are met in a timely manner.
3. Ensuring that sources initially found in compliance or sources that come into compliance continue to meet emission requirements.

At the present time, the States and EPA are in the process of completing the first of the three major tasks in achieving compliance - the development of compliance schedules. Progress has been made in ensuring compliance of major point sources. As of December 31, 1973, EPA had issued notices of violation to a cumulative total of 82 facilities and abatement orders to 24 of these. In addition, some 930 Section 114 letters¹ have been written and 600 inspections and 24

1. Clean Air Amendments of 1970, Public Law 91 604, December 31, 1970.

source tests have been conducted by EPA to ascertain compliance status of sources. These investigations are expected to culminate in the establishment of compliance schedules by either the State or EPA. The goal is to attempt to achieve the EPA objective of having all point sources either in compliance or on an approved, reasonable compliance schedule by June 30, 1974.

However, the degree of compliance is not satisfactory to the EPA. This is primarily due to the inability of States and EPA to quickly focus massive efforts into plan enforcement. Adding to the complexity of the task has been the contention by the utility industry and others that control technology for the abatement of sulfur oxides from fuel combustion is unavailable. During October and November 1973, EPA held public hearings to investigate the status of utility abatement programs and availability of control measures. The following section is a special analysis of the compliance status of the electric utility industry.

STATUS OF POWER PLANT COMPLIANCE

From October 18 to November 2, 1973, EPA held a special public hearing in the Washington, D. C., area to review the status of power plant compliance with sulfur oxide (SO_x) air pollution emission limitations. This hearing was called because power plants are the largest source of SO_x emissions in the United States (emitting about 60 percent of total SO_x), because large numbers of power plants are not yet in compliance with SO_x emission limitations, and because, in most cases, only 18 months remain under the established implementation plans for these plants to achieve compliance.

There are about 970 fossil-fueled power plants in the United States today having a combined generating capacity of about 302,000 megawatts. Of this capacity, roughly 55 percent (166,000 megawatts) is produced by coal-fired power plants, 17 percent (51,000 megawatts) by oil-fired plants, and 28 percent (85,000 megawatts) by gas-fired plants. All gas-fired plants are obviously now in compliance with SO_x emission requirements. Some of the coal- and oil-fired plants were in compliance with SO_x emission requirements when the requirements were adopted, and many other plants have been or are now being brought into compliance by converting to fuels having lower sulfur contents.

Switching to a low-sulfur fuel would seem to be the simplest route to compliance with SO_x emission requirements. Coal washing and/or limited blending of present fuels with lower sulfur fuel would not be required. However, use of supplies of low-sulfur western coal by plants east of the Mississippi River would result in a failure to use readily available high-sulfur eastern coal during a short-term fuel supply crisis. The energy crisis will aggravate the existing shortage of low-sulfur fuels. Since supplies of low-sulfur fuels will be insufficient, flue gas desulfurization (FGD) systems will be required on a large number of power plants in order to achieve compliance with SO_x emission limitations. Use of FGD systems will enable power plants to meet emission requirements while using important high-sulfur fuel resources.

Many utilities have suggested that, rather than meet existing SO_x emission requirements, they be allowed to use tall stacks and intermittent control systems (supplementary control systems) to achieve ambient air quality standards. Such techniques rely upon the dispersion

of pollutants instead of the constant reduction of pollutant emissions. As discussed in Section 2, EPA considers constant emission reduction techniques, such as FGD, far superior to dispersion techniques and has proposed regulations that limit the use of such dispersion techniques to situations where constant emission reduction controls are not available. Dispersion techniques can, however, often be appropriately required as interim steps (to minimize the impact of plant operation on air quality) in schedules requiring compliance with emission limitations.

Principal among the findings of the EPA hearing panel are the following:

1. FGD technology must be installed on large numbers of power plants if SO_x emission requirements adopted pursuant to the Clean Air Act are to be met in the 1970's. Supplies of low-sulfur fuels are now and will continue to be inadequate to provide the sole means of complying with SO_x emission limitations.
2. With several noteworthy exceptions, the electric utility industry has not aggressively sought out solutions to the problems they argue exist with FGD technology.
3. Although most utility witnesses testified that FGD technology was unreliable, that it created difficult sludge disposal problems, and that it cost too much, the hearing panel found, on the basis of utilities and FGD vendor testimony, that the alleged problems can be, and have been, solved at a reasonable cost. The reliability of both throwaway-product and saleable-

product FGD systems has been sufficiently demonstrated on full-scale units to warrant widespread commitments to FGD systems for SO_x control at coal- and oil-fired power plants.

4. The utility industry has generally lacked a real incentive to develop FGD technology and to install this technology where needed to meet SO_x emission requirements.

The hearing panel concluded that the electric utility industry should:

1. Make immediate commitments to install FGD systems where needed to meet SO_x emission requirements, giving priority to those sources where controls are needed to meet primary ambient air quality standards and new source performance standards.
2. Aggressively pursue FGD developmental programs to improve reliability, to lower operating costs, and to advance FGD technology that results in a saleable by-product.
3. Undertake further characterization and evaluation efforts on sludge disposal, with emphasis on large-scale systems, to assure the widespread applicability and effectiveness of sludge disposal systems at reasonable costs.
4. Hire and train personnel with the skills needed to properly design and operate FGD systems.

According to the panels, EPA and the States should:

1. Create a strong incentive for the installation of FGD systems by establishing expeditious but reasonable compliance schedules and by vigorously enforcing these schedules.

2. Formalize procedures for dealing with unpreventable control system malfunction where such formal procedures do not already exist.
3. Urge State public utility commissions to treat increased costs from FGD control in the same manner as increased fuel costs are treated.
4. Consider such other methods of creating an incentive to control SO_x emissions as the Administration's proposed charge (tax) on SO_x emissions.

The panel further concluded that compliance schedules established by the utilities, States, and EPA should:

1. Be developed for each utility after considering the number and types of plants requiring FGD systems and the need to properly sequence installations to preserve utility power reserves.
2. Give priority to installation of FGD systems at those plants where systems are needed to meet primary ambient air quality standards and new source performance standards.
3. Require installation of FGD systems at a rate commensurate with vendor capacity.
4. Require, where feasible, the use of interim control measures such as intermittent control systems in order to minimize the impact of SO_x emissions on air quality until FGD systems can be installed.

The Office of Enforcement and General Counsel (OEGC) and the Regional Offices of EPA have initiated a program to carry out these recommendations. In particular, basic data on each power plant are being

gathered, and a strategy is being developed to establish compliance schedules for all utilities based on the priorities established.

ENFORCEMENT OF SIPs

During the semiannual period covered by this progress report, the SIP enforcement activity of EPA has progressed from the planning and strategy development phase to an active, functional level. The previous report² presented a detailed discussion of the development of enforcement strategies and the various regulatory and litigation actions available to EPA; this discussion will not be repeated here. Rather, this report will focus on the outputs stemming from implementation of these strategies and will cover the following four broad areas: (1) establishment of reasonable compliance schedules for all major sources, (2) surveillance and investigation programs to monitor compliance schedules, (3) utilization of the automated Compliance Data System (CDS) for managing compliance data, and (4) EPA enforcement actions to keep sources in compliance or on compliance schedules.

Establishment of Compliance Schedules

During the first half of 1973, the primary emphasis of EPA's enforcement program was to place major sources on compliance schedules for meeting SIP requirements. As discussed in the previous report, individual and categorical compliance schedules were promulgated by States, and in cases where the State did not act, by EPA. Any source whose emissions would violate applicable emission standards after

2. State Air Pollution Implementation Plan Progress Report, January 1 to June 30, 1973. U.S. Environmental Protection Agency, Research Triangle Park, N. C. EPA-450/2-73-005. September 1973.

January 1974 is required to meet the increments of progress in these schedules (some 10,000 complying and noncomplying point sources are covered by these regulations). An additional 10,000 facilities are subject to presently effective requirements, of which a large number have been placed on some type of compliance schedule.

Although a large number of major sources have been placed on schedules, a significant number of sources are known to require compliance schedules, and determinations of compliance status have yet to be made for many more. Compliance monitoring programs, addressed below, are being implemented to ensure compliance determinations are made for all sources. As of December 31, 1973, approximately 3500 point source facilities were still not on a reasonable schedule or in compliance. Of these, schedules for 1600 point sources have been submitted by the States and are in various stages of being approved by EPA in the Federal Register. Table 5-1 provides detailed information on the status of compliance schedules in each State. A point source facility refers to any facility having at least one emission point with an annual potential emission greater than 100 tons per year of a criteria pollutant.

For the remaining problem sources, one of the following mechanisms must be used to establish these schedules:

1. State develops schedules and submits to EPA as plan revisions if compliance date is within attainment date set by approved SIP.
2. State issues enforcement orders establishing schedules and submits to EPA for approval and/or joint enforcement action

if necessary if compliance date is beyond attainment date in SIP.

3. EPA issues notice of violations and follows up with abatement order.

If a violator cannot reasonably be expected to comply immediately with an applicable requirement and has been making a good-faith effort to comply, issuance of an order will normally be the most appropriate action. The time allowed for compliance is required to be a reasonable time, as determined by the Regional Administrator, taking into account the seriousness of the violation and any good faith efforts to comply with applicable requirements. The person in violation will have had or will have to be given an opportunity to provide information on this point at the statutorily required conference under Section 113(a)(4) of the Clean Air Act.

Monitoring Compliance

A major activity of air enforcement after the establishment of reasonable compliance schedules is to keep sources on schedule and, upon reaching final compliance, to ensure that sources remain in compliance through proper operation and maintenance of the facility. A program of compliance monitoring including both paper surveillance (citizen complaints, State semiannual reports, and Section 114 letters) and field surveillance (inspections, opacity observations, source tests, etc.) is being initiated in each Regional Office. The program will concentrate on development of adequate information to enable EPA to fulfill its role in monitoring State effectiveness in enforcing the SIPs. It is essential that all major point sources be inspected

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Table 5-1. POINT SOURCE COMPLIANCE STATUS, INVESTIGATIONS,
AND DATA SYSTEMS SUMMARY

EPA Region State	Compliance status summary					Investigations summary			Data system summary		
	Number of Facilities	In compliance	On approved schedules	Placed on approved schedules during this period	Not on approved schedules or in compliance	Section 114 letters	Source tests/ inspections	Visible emission observations	Point sources on CDS		Total sources on CDS*
									Number	Percent	
Region I											
Connecticut	177	90	36	36	51	0	4	0	...		24
Maine	99	78	18	1	3	0	0	0	99	100	145
Massachusetts	271	223	32	32	16	104	14	25	271	100	400
New Hampshire	30	29	1	1	0	0	15	0	30	100	43
Rhode Island	69	60	7	3	2	0	4	0			
Vermont	32	26	6	0	0	1	0	0			
Total	678	506	130	73	72	108	37	25	490	71	612
Region II											
New York	480	270	168	168	42	20	1	0	19	4	72
New Jersey	258	46	89	89	123	10	0	0	173	67	459
Puerto Rico	10	29	63	63	15	0	0	0	78	73	276
Virgin Islands	9	4	1	1	4	3	3	0	9	100	16
Total	854	349	321	321	184	33	4	0	279	33	823
Region III											
District of Columbia	44	0	0	0	42	2	2	1	27	61	44
Delaware	54	82	0	0	12	0	0	0	48	89	48
Maryland	168	90	0	0	78	11	0	0	106	63	195
Pennsylvania	1,142	902	0	0	240	49	1	1	498	40	1,000
Virginia	208	98	0	0	110	27	2	2	208	100	582
West Virginia	288	41	0	0	247	23	0	0	12	4	192
Total	1,904	1,115	0	0	402	116	5	4	888	45	2,179
Region IV											
Alabama	1,103	736	0	0	367	12	4	2			
Florida	777	244	0	0	532	14	1	0			
Georgia	779	498	0	0	281	15	0	0			
Kentucky	1,080	421	285	0	659	0	0	0			
Mississippi	1,045	63	0	0	982	374	0	3			
North Carolina	2,026	677	1,349	168	679	0	0	0			
South Carolina	471	173	290	32	64	0	0	0			
Tennessee	582	304	27	10	278	4	0	0			
Total	8,233	2,934	2,413	209	2,786	30	15	2			
Region V											
Illinois	340	182	162	162	58	0	7	78	118	33	114
Indiana	243	70	0	0	173	149	28	688	1	1	3
Michigan	233	164	0	0	69	10	0	0	50	24	56
Minnesota	166	51	0	0	115	0	0	0	47	28	47
Ohio	450	96	0	0	354	26	0	0			
Wisconsin	181	77	0	0	104	11	0	278	28	28	36
Total	1,594	634	162	162	794	229	48	770	263	16	265
Region VI											
Arkansas	164	32	0	0	132	0	2	0			
Louisiana	201	85	0	0	116	101	0	0			
New Mexico	92	62	0	0	30	0	0	0			
Oklahoma	91	87	0	0	4	0	0	0			
Texas	1,595	1,440	0	0	155	0	0	0	11	0.5	20
Total	2,048	1,766	0	0	286	101	2	0	11	0.5	21
Region VII											
Nebraska	22	10	0	0	12	0	11	27	26	60	94
Omo	129	40	0	0	89	0	0	0	0		
Kansas	284	217	0	0	67	0	0	0	0		
Missouri	128	73	2	2	53	2	3	3	0		
Total	523	360	2	2	161	26	29	29	26	16	79
Region VIII											
Colorado	54	40	6	6	0	6	0	4			
Montana	19	13	0	0	6	20	1	0			
North Dakota	50	17	0	0	33	2	0	0	50	100	50
South Dakota	47	16	0	0	31	0	0	0			
Utah	46	30	11	11	15	0	0	32			
Wyoming	54	31	18	18	23	6	1	34			
Total	386	199	189	189	32	34	2	62	50	13	50
Region IX											
Arizona	263	190	0	0	73	14	20	Unavailable on State basis	15	6	15
California	1,580	1,473	0	0	107	163	197		52	3	94
Nevada	64	57	0	0	7	0	0				
American Samoa	0	0	0	0	0	3	8		18	28	22
Guam	15	10	0	0	5	0	0				
Total	1,902	1,760	0	0	202	200	225	359	85	4	131
Region X											
Alaska	21	2	18	15	3	0	0	0	21	100	31
Idaho	60	0	0	0	60	5	1	0	40	100	187
Oregon	334	119	33	33	192	0	0	0	334	100	395
Washington	330	184	19	19	127	4	14	0	195	60	278
Total	745	293	90	90	362	9	15	0	610	84	891

*See footnote on the next page.

periodically by the responsible State or local agencies to ensure continuing compliance by sources. EPA intends to inspect a selected number of major facilities as part of its field surveillance effort. A point source facility will not be considered in compliance unless a definitive determination of that fact has been made by the State or EPA.

Table 5-1 presents the current status of investigations undertaken by EPA during the semiannual period covered by this report. It is noted that the compliance status of sources, particularly for those indicated as in compliance in Table 5-1, has not been verified by actual inspection or other investigations for many facilities. Thus, EPA in cooperation with the States, is initiating a major effort in compliance monitoring to definitively determine compliance status of sources.

Compliance Data System

A program of compliance monitoring to determine affected sources and their compliance status is being initiated in each Regional Office.

^aPoint sources and other sources.

^bFree number of identified point source facilities and their compliance status in Connecticut and Massachusetts is suspect. Investigations are underway to determine the compliance status of sources in these States.

^cConnecticut's CDS source size designations have not yet been entered into the system.

^dPoint sources for New York and New Jersey are considered to be underestimated. Number of sources and compliance status in New York are particularly suspect. EPA has initiated a cooperative program with New York State to develop more accurate source information.

^eAlthough no schedules for Region III were approved this period, a large number have been submitted and approval is expected during the next semiannual period.

^fCompliance information on sources for West Virginia had not been provided by the State as of December 31, 1973. This information is expected to be available for the next semiannual progress report.

^gAll numbers for Region IV represent emission points, not source facilities.

^hCompliance schedules submitted; EPA approval expected during next semiannual period: Alabama 779, Florida 477, Georgia 35, Mississippi 623, Kentucky 374, North Carolina 38, South Carolina 8, and Tennessee 111.

ⁱAll approved schedules in Region V were promulgated by EPA. Visible emission observations apply to emission points, not point sources.

^jCompliance schedules submitted; EPA approval expected during next semiannual period: Indiana 28, Michigan 47, Minnesota 24, Ohio 80, and Wisconsin 60.

^kCompliance schedules submitted; EPA approval expected during next semiannual period: Arkansas 132, Louisiana 61, New Mexico 5, Oklahoma 10, and Texas 18.

^lThe number of sources designated as in compliance in Texas is unusually high and will need to be verified by field investigations.

^mCompliance schedules for emission points (not facilities) submitted and EPA approval pending: Nebraska 22, Iowa 90, Kansas 208, and Missouri 16.

ⁿCompliance schedules submitted; EPA approval expected during next semiannual period: Arizona 32, California 37, Hawaii 35, and Nevada 10.

^oThe number of point sources in compliance in California has not been verified in all cases.

^pCompliance schedules submitted; EPA approval expected during next semiannual period: Idaho 30, Oregon 55, and Washington 73.

This program concentrates on the development of adequate source information to follow the States' progress in enforcing their SIPs.

OEGC has developed a computer system known as the Compliance Data System (CDS), which has been in operation since June 1973. The CDS is not a data system, as such, but an enforcement management system. It is designed to assist Regional Office programs by performing the following functions:

1. Provide statistical breakdowns of State enforcement progress and produce source listings by compliance status, industrial category, emission potential category, geographic location, and/or pollutant in order that State enforcement strategies may be developed and revised.
2. Ease the State burden of reporting enforcement progress semi-annually through the use of simple questionnaires, tailored to the actions the States should have monitored over the preceding 6-month period.
3. Provide a means for managing numerous enforcement actions by furnishing summaries of EPA-to-source interactions, writing form letters, tracking increments of progress or other dates pertaining to enforcement, assisting in assigning work loads such as inspection and source observations to personnel, and producing summaries of future and overdue work actions.
4. Provide a summary of State enforcement actions that result in civil or criminal penalties and a summary of EPA enforcement activities including inspections, source tests, notices of violation, abatement orders, and civil/criminal actions. These summaries have been designed to reflect in a meaningful way both the States' and EPA's efforts toward implementing the requirements of the SIPs.

The present status of CDS is that of both expanding and refining the basic inventory of source and compliance information while evolving to provide faster and more versatile reporting capabilities. Some assistance has been provided to a few Regional Offices to aid their efforts in the startup of the system in those Regions. Within the next few months, a great deal more assistance will be provided to those Regions requiring help so that they can complete the startup phase of system operations.

The CDS master file, which is maintained and updated by the Regions through computer terminals and regular weekly updates, as of January 23, 1974, included about 4000 point source facilities, which is about 30 percent of the total number of point source facilities in the nation. Depending on the Region and State, the quantity and quality of this information varies greatly. To some extent, these characteristics reflect the amount of effort being devoted to system implementation in each Region.

Based on estimates provided to the Division of Stationary Source Enforcement by the Regions in January 1974, the number of facilities that could potentially emit 100 tons per year of a pollutant versus those currently on CDS is shown by Region and State in Table 5-1.

Enforcement Actions

It is EPA's policy that violations of approved implementation plans be promptly prosecuted either by the appropriate State or local agency or by EPA. It is the intent of Congress that the Federal government should defer to a State agency when such agency is moving effectively to abate a source that is in violation of the SIP. However, a notice of violation triggering Federal enforcement will be issued whenever it appears that a State cannot or will not take effective abatement action

within a reasonable period of time. In some cases, where a State agency is willing to enforce but lacks the resources to do so, EPA will support the State with technical assistance rather than initiate independent action.

It should also be remembered that SIPs do represent requirements of Federal law and that EPA has ultimate responsibility for their enforcement. Where serious violations have occurred, Federal enforcement action may have more impact and may be required to provide adequate assurance of future compliance. EPA enforcement action in such cases does not imply that the State agency has failed to perform its responsibilities.

Regional Offices have the primary responsibility for the initiation and conduct of enforcement actions under Section 113 of the Clean Air Act. Notices of violation are issued by the Regional Administrator in accordance with guidance and policy established by EPA's Assistant Administrator for Enforcement and General Counsel.

USE OF SECTION 114

Section 114(a)(1) of the Clean Air Act enables the Administrator to require owners or operators of emission sources "to (A) establish and maintain such records, (B) make such reports, (C) install, use, and maintain such monitoring equipment or methods, (D) sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe, and (E) provide such other information, as he may reasonably require." Section 114(a)(2) authorizes right of entry for certain purposes and the right of the Administrator to sample emissions.

Section 114(a)(ii) provides that the Administrator may require the owner or operator of any source to provide information for the purpose

of determining "whether any person is in violation of any such standard or any requirement of such a plan." This is one of the most important enforcement tools under the Clean Air Act, in that the source can be required to provide the information that may be the basis for enforcement action by EPA. Regions are urged to make extensive use of Section 114 for enforcement purposes since this is usually the most effective method of obtaining the necessary information to begin an enforcement action.

Section 114(a)(2) enables the Administrator or his authorized representative to enter a source so that EPA can do its own monitoring, sampling, inspecting, or copying of records. This authority also can be used to determine whether a source is carrying out any obligations imposed on it by EPA under Section 114(a)(1).

Where a State has been delegated Section 114 authority from EPA, the same authority EPA has to monitor, sample, inspect or copy records, and any other authority under Section 114(a)(1) and (2) of the Clean Air Act can, in like manner, be exercised by the State. No representative of EPA need accompany the State officials.

USE OF SECTION 113

Section 113 of the Clean Air Act provides for Federal enforcement in cases of violation of a Federal standard or any requirement of a Federally approved SIP.

In the case of a violation of a provision of a Federally approved SIP, the Administrator must first issue a notice of violation, unless the Administrator has declared that State in which the violation occurred to be in a "period of Federally assumed enforcement." (Federally assumed enforcement, under which Federal enforcement procedures are

more expeditious, is appropriate whenever a State fails generally to enforce an implementation plan effectively.) Thirty days after the issuance of a notice of violation, the Administrator may issue an order or bring a civil action.

He may also issue an order or bring a civil action in the case of a violation of a new source performance standard or an emission standard for a hazardous air pollutant. No notice of violation is required in such cases.

In addition, Section 113 makes it a criminal offense for any person to knowingly violate any requirement of an applicable implementation plan more than 30 days after issuance of the notice of violation (or at any time during a period of Federally assumed enforcement). Criminal penalties are also provided for knowingly failing to comply with any order of the Administrator, or for knowingly violating a new source performance standard or an emission standard for a hazardous air pollutant.

The criminal penalties provided under Section 113 are a fine of not more than \$25,000 per day of violation, imprisonment for not more than 1 year, or both. For any subsequent conviction, the penalties are a fine of up to \$50,000 per day of violation, imprisonment for not more than 2 years, or both.

Table 5-2 details each enforcement action taken by EPA since the approval of SIPs. The next semiannual progress report is expected to show a significant increase in such actions.

Table 5-2. SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Results or status
Allied Chemical Corp./sulfuric acid plant	Claymont, Delaware; Region III	Violation of Delaware mass emission rate regulations.	Notice of violation issued May 24, 1972. Order to comply issued July 20, 1972.	Commencing on October 10, 1972, bi-monthly progress reports have been submitted to EPA. Information submitted to EPA on the construction of an emission control facility to comply with the regulations had resulted in a construction schedule with increments of progress being established. Said schedule is presently being complied with by Allied Chemical Corp.
Delmarva Power and Light Company/steam generator	Delaware City, Delaware; Region III	Violation of Delaware regulation requiring the use of fuel containing not in excess of 3.5 percent sulfur.	Notice of violation issued March 6, 1972. Order to comply issued April 17, 1972.	At the conclusion of litigation instigated by Getty Oil Company for a court order restraining enforcement of the fuel sulfur content regulation, the order to comply was upheld. (The interest of Getty Oil Co. in this matter arises from a contractual arrangement between Delmarva Power and Light Co. and Getty Oil Co. under which Getty provides Delmarva Petroleum coke for fuel in exchange for electricity.) Getty Oil Co. (Eastern Operations) vs. Ruckelshaus (342 F. Suppl. 1006; 467 F. 2d. 349; Jan. 15, 1973). Source is presently in compliance.

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Result or status
City of Woonsocket/ open burning	Woonsocket, Rhode Island; Region I	Open burning at municipal refuse disposal facility in violation of Rhode Island regu- lations.	Notice of violation issued on Feb. 7, 1973. Order to com- ply issued July 7, 1973.	On March 7, 1973, a conference was held with representatives of the city, who agreed to cease all open burning of debris except that gener- ated by Department of Housing and Urban Development (HUD). Region I is attempting informally to assist HUD in the resolution of its dis- posal problems.
City of Newport/ open burning	Newport, Rhode Island; Region I	Violation of Rhode Island regu- lation prohibiting open burning at public refuse dis- posal sites and prohibiting the emission of harm- ful contaminants.	Notice of violation issued Oct. 23, 1972. Order to com- ply issued Jan. 11, 1973.	The Newport refuse disposal site is under surveillance, and pursuant to Section 113, judicial proceedings are authorized if further violations of the regulations occur. Present- ly in compliance.
City of Middletown/ open burning	Middletown, Rhode Island; Region I	Violation of Rhode Island regu- lation prohibiting open burning at public refuse dis- posal sites and prohibiting the emission of harm- ful contaminants.	Notice of violation issued Oct. 13, 1972. Conference held between EPA and Middletown officials Nov. 6, 1972.	Presently in compliance with regula- tions, but order to comply will be issued if future violations occur.

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Result or status
Texaco, Inc./ petroleum manufacture and distribution	Massachusetts; Region I	Selling fuel with higher sulfur con- tent than permit- ted under Massa- chusetts regula- tions.	Notice of violation issued Feb. 1, 1973.	On Feb. 12, 1973, pursuant to a Sec- tion 114 letter, Texaco met with Region I personnel and provided in- formation with respect to fuel avail- ability and demand. Since this meet- ing Texaco has ceased its violation.
American Barrel Co./ drum reclamation furnace and incinerator	Massachusetts; Region I	Operation of drum reclamation fur- nace violating Massachusetts regulations re- garding open burning, visible emissions, and general air pol- lution.	Notice of violation issued Mar. 15, 1973. Administra- tive order issued Sept. 18, 1973.	Presently in compliance with order.
Northeast Utilities Service/steam generator	Massachusetts; Region I	Burning fuel with a higher sulfur content than per- mitted under Mas- sachusetts regu- lations.	Notice of violation issued Mar. 16, 1973.	Presently in compliance with regula- tion.

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Result or status
U.S. Steel Corp., Gary Works, and Universal Atlas Cement, Buffington Harbor Plant/steel mill and cement plant	Gary, Indiana; Region V	Operation of a steel mill with cement production facilities in violation of Indiana's regulations regarding visible emissions, combustion for industrial heating, and process operations.	Notice of violation issued April 18, 1973. Order to comply issued June 22, 1973.	U.S. Steel requested U.S. District Court, Hammond, Indiana, for a stay of the order and declaratory judgments to void order. EPA counterclaimed to enforce the terms of the order (first increment past) on August 15, 1973. U.S. District Court denied U.S. Steel's motion to stay and will hold hearing on the merits of declaratory judgment for those issues not dismissed. EPA has entered into settlement discussions with U.S. Steel to obviate necessity for hearing on merits.
Wabash Smelting Corp./secondary aluminum plant	Indiana; Region V	Violation of Indiana regulations for visible emissions and process operations.	Notice of violation issued Mar. 28, 1973. Order to comply issued May 30, 1973.	Presently in compliance with terms of the order.
H.N. Hartwell and Son, Inc./petroleum distributor	Massachusetts; Region I	Selling fuel with a higher sulfur content than permitted under Massachusetts regulations.	Notice of violation issued March 16, 1973.	Presently in compliance with regulations.
Union Petroleum Corp./petroleum distributor	Massachusetts; Region I	Selling fuel with a higher sulfur content than permitted under Massachusetts regulations.	Notice of violation issued March 16, 1973.	Presently in compliance with regulations.

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Result or status
Central Electric Power Cooperative/power plant	Jefferson City, Missouri; Region VII	Power company refused to submit information requested in Section 114 letter.	Administrative order issued May 2, 1973.	All the information required in the administrative order has been provided.
Hercules, Inc., Missouri Chemical Works/fertilizer manufacturer (ammonium nitrate and urea processes)	Louisiana, Missouri; Region VII	Operation of facility in violation of Missouri particulate matter regulations regarding process operations.	Notice of violation issued May 16, 1973. Order to comply issued Oct. 15, 1973.	Presently in compliance with terms of order.
Asarco/primary lead smelter	Glover, Missouri; Region VII	Violation of Missouri SO ₂ regulations.	Notice of violation issued July 2, 1973. Administrative order issued Oct. 23, 1973.	On November 19, 1973, Asarco requested U.S. District Court, Kansas City, Missouri to stay the order. Oral arguments will be held if EPA and Asarco cannot settle case out of court.
Centropolis Crusher, Inc./stone crusher	Kansas City, Missouri; Region VII	Refused to submit information required in Section 114 letter.	Order issued on June 6, 1973.	All information required in the order has been provided.
City of Lawrence/open burning	Lawrence, Massachusetts; Region I	Violation of Massachusetts open burning regulation.	Notice of violation issued June 6, 1973	

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Result or status
South California Edison, Mohave Power Plant	Nevada; Region IX	Violation of State visible emission regulations and SO ₂ emission limits.	Notice of violation issued July 25, 1973; order to comply issued Nov. 1, 1973.	Presently in compliance with terms of order.
City of Bristol/ open burning	Bristol, Rhode Island; Region I	Open burning at municipal refuse disposal facility in violation of Rhode Island regulations.	Notice of violation issued April 23, 1973.	
Katibab Industries/ wood waste burners	Payson, Arizona; Region IX	Violation of Arizona visible emission regulations.	Notice of violation issued July 24, 1973. Administrative order issued Sept. 26, 1973.	Presently in compliance with terms of order.
Western Pine Industries/wood waste burners	Snowflake, Arizona; Region IX	Violation of Arizona visible emission regulations.	Notice of violation issued July 24, 1973.	
Western Moulding Co., Inc./wood waste burners	Snowflake, Arizona; Region IX	Violation of Arizona visible emission regulations.	Notice of violation issued July 24, 1973.	
Wilfret Brothers Realty Trust/ incinerator	Arlington, Massachusetts; Region I	Violation of Massachusetts regulations on incinerators.	Notice of violation issued July 2, 1973. Administrative order issued Nov. 30, 1973.	Presently in compliance with terms of order.

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Result or status
Penn Central Trans. Company/passenger and freight terminals	Massachusetts; Region I	Transfer of cement products creating visible emissions problem and trucks idling contrary to requirements of Massachusetts SIP.	Notice of violation issued July 2, 1973.	
Independent Stave Co., Inc./boilers, cyclones, tepee burner, and incinerator	Lebanon, Missouri; Region VII	Violation of Missouri particulate matter (process emissions) and visible emissions regulations.	Notice of violation issued July 9, 1973. Supplemental notice of violation issued Oct. 10, 1973. Order to comply on first notice issued Oct. 16, 1973.	
Bethlehem Steel Corp., Burns Harbor Plant/steel mill	Chesterfield, Indiana; Region V	Violation of Indiana visible emission and particulate emissions (process weight) regulations.	Notice of violation issued July 11, 1973.	No order issued since three sources presently in compliance and coke ovens on satisfactory State order.
Kaiser Steel Corp./steel mill	Fontana, California; Region IX	Violation of California visible emission and SO ₂ regulations (H ₂ S standard).	Notice of violation issued Aug. 7, 1973.	

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Result or status
Eight wood waste burners	Mendocino and Northern Sonoma County, California; Region IX	Violation of California visible emission regulations.	Notice of violation issued Aug. 15, 1973.	
Seaboard Foundry, Inc./gray iron foundry	Johnston, Rhode Island; Region I	Violation of visible emissions and particulate emissions (process weight) regulations.	Notice of violation issued Aug. 1, 1973.	
Inland Steel Co./integrated steel mill	East Chicago, Indiana; Region V	Violation of Indiana visible emissions from combustion for industrial heating and process operations regulations.	Notice of violation issued July 18, 1973.	At present time, no further Federal action anticipated since cited sources either on enforceable State schedule or currently in compliance.
Youngstown Sheet and Tube Company/ integrated steel mill	East Chicago, Indiana; Region V	Violation of Indiana visible emissions from combustion for industrial heating and process operations regulations.	Notice of violation issued July 18, 1973.	
Roberts Construction Company/limestone quarrying and crushing	Sundance, Wyoming; Region VIII	Violation of ambient air standard for total suspended particulates as provided in Wyoming SIP.	Notice of violation issued Aug. 16, 1973. Order to comply issued Sept. 28, 1973.	Presently in compliance with terms of order.
Missouri Power and Light Company/power plant	Jefferson City, Missouri; Region VII	Refused to submit information required in Section 114 letter.	Administrative order issued Aug. 1, 1973.	Source complied with terms of order.

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Result or status
J. Edward Moran Generating Station, City of Burlington, Electric Light Dept./ boilers (power plant)	Burlington, Vermont; Region I	Violation of Vermont particulate matter and visible emissions regulations.	Notice of violation issued on Aug. 14, 1973.	
Atlantic-richfield Corporation/oil refinery	East Chicago, Indiana; Region V	Violation of Indiana SO ₂ regulation (APC- 13).	Notice of violation issued Sept. 10, 1973.	Source in compliance.
Mobil Oil Corpora- tion/oil refinery	East Chicago, Indiana; Region V	Violation of Indiana SO ₂ (APC-13) and vis- ible emission (APC- 3) regulations.	Notice of violation issued Sept. 10, 1973.	Source in compliance.
American Oil Company/oil refinery	Whiting, Indiana; Region V	Violation of Indiana SO ₂ (APC-13) and vis- ible emissions (APC- 3) regulations.	Notice of violation issued Sept. 10, 1973.	
Borden, Inc./ phosphate plant	Palmetto, Florida; Region IV	Refused to submit in- formation required in Section 114 letter. (NSPS development).	Administrative order issued Aug. 17, 1973.	Source complied with administra- tive order by submitting required data.

Table 5-2.(cont.). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Results or status
New England Power Company, Brayton Point Power Station	Somerset, Massachusetts; Region I	Violation of Massachusetts general regulation to prevent air pollution and visible emission regulations.	Notice of violation issued Sept. 6, 1973.	
Alpha Portland Cement Company/clinker cooler	Afton, Missouri; Region VII	Violation of Missouri particulate matter (process weight) regulation.	Notice of violation issued Sept. 28, 1973.	
U. S. Gypsum Company/mill rock process, shingle finish process, packing process	East Chicago, Indiana; Region V	Violation of Indiana particulate matter (process emission APC-5) and visible emission (APC-3) regulations.	Notice of violation issued Oct. 5, 1973.	
Sullard Castings, Inc./cupola furnaces	Bridgeport, Connecticut; Region I	Violation of Connecticut particulate matter (process emissions, visible emissions, and fugitive dust) regulations.	Notice of violation issued Oct. 12, 1973.	

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Result or status
U.S. Gypsum Co./ mineral wool processes; cupolas, blow chambers, curing oven, asphalt frame control	Wabash, Indiana; Region V	Violation of Indiana particulate matter (process emission, APC-5) regulations.	Notice of violation issued Oct. 5, 1973.	
C.F. Industries/ ammonium nitrate pulling process	Terre Haute, Indiana; Region V	Violation of Indiana particulate matter (process emissions, APC-5) regulations.	Notice of violation issued Oct. 9, 1973.	
Universal Atlas Cement/cement process	Hannibal, Missouri; Region VII	Refused to submit information requested by Section 114 letter.	Administrative order issued Oct. 1, 1973.	Source complied with terms of order.
Cities of Lamont, Dayton, Connell, and Oakesdale and Whitman County, Washington	Washington; Region X	Violation of Washington open burning regulations.	Notice of violation issued Sept. 21, 1973.	
NIPSCO Bailly State/ power plant boilers	Gary, Indiana; Region V	Violation of Indiana SO _x regulations (APC-13).	Notice of violation issued Sept. 13, 1973.	Administrative order pending. Seventh Circuit decision.
West Penn Power Co., Mitchell State	Courtney (Wash. County), Pennsylvania; Region III	Violation of Pennsylvania SO _x and particulate matter regulations.	Notice of violation issued Sept. 13, 1973.	Conference held on October 18, 1973.
Public Service Co. of Indiana Wabash River Station	Terre Haute, Indiana; Region V	Violation of Indiana SO _x regulation (APC-13).	Notice of violation issued Sept. 13, 1973.	Administrative order pending. Seventh Circuit decision.

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Results or status
Can-Tex Industries, Inc./clay shale grinding and storage	Cannellton, Indiana; Region V	Violation of Indiana particulate matter (process emission, APC-5) regulations.	Notice of violation issued Oct. 17, 1973.	
Pacific Company, Washington Dump, Peninsula Disposal Service	Long Beach (Pacific County), Washington; Region X	Violation of Washington open burning regulations.	Notice of violation issued Oct. 17, 1973.	
U.S. Gypsum/plaster and panel	Shoals, Indiana; Region V	Violation of Indiana particulate matter (process emission, APC-5) regulations.	Notice of violation issued Oct. 5, 1973	
Container Corp. of America/boilers	Mabash, Indiana; Region V	Violation of Indiana particulate matter from combustion of fuel for indirect heating (APC-4R) and SO ₂ (APC-13) regulations.	Notice of violation issued Oct. 9, 1973.	
Kieffer Paper Mill/boilers	Brownstown, Indiana; Region V	Violation of Indiana particulate matter from combustion of fuel for indirect heating (APC-4C) regulations.	Notice of violation issued Oct. 12, 1973.	

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/Type of source	Location	Pollution problem	Type of action	Results or status
Central Soya Company/boilers	Indianapolis, Indiana; Region V	Violation of Indiana particulate matter from combustion of fuel for indirect heating (APC-4R) regulations.	Notice of violation issued Oct. 12, 1973.	
Indiana University Physical Plant/power plant	Bloomington, Indiana; Region V	Violation of Indiana particulate matter from combustion of fuel for indirect heating (APC-4R) regulations.	Notice of violation issued Oct. 24, 1973; administrative order issued Jan. 8, 1974.	Presently in compliance with terms of order.
International Harvester Co./boilers	Indianapolis, Indiana; Region V	Violation of Indiana particulate matter from combustion of fuel from indirect heating regulations.	Notice of violation issued Oct. 26, 1973.	
Anache Powder Co./nitric acid plant; solid waste and open burning	Renson, Arizona; Region IX	Violation of Arizona visible emission, open burning, and NO _x emission from existing nitric acid plant regulations.	Notice of violation issued Nov. 13, 1973.	
Mid-Continent Asphalt and Paving/asphalt and paving facility	Parkville, Missouri; Region VII	Violation of Missouri visible emission regulation.	Notice of violation issued Oct. 19, 1973.	

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Results or status
United States Steel, Clairton Coke Works/ coke ovens	Clairton, Pennsylvania; Region III	Violation of visible emissions and particulate matter emissions regulations (regulations are result of Pennsylvania plan revision incorporating consent decrees into plan).	Notice of violation issued Nov. 8, 1973	
Bloomington Crushed Stone Co., Inc./ quarry	Bloomington, Indiana; Region V	Violation of Indiana visible emission and particulate matter (process emission) regulations.	Notice of violation issued Oct. 31, 1973.	Presently in compliance with regulation.
The Weston Paper and Manufacturing Co./boilers	Terre Haute, Indiana; Region V	Violation of Indiana particulate matter from combustion of fuel for indirect heating and SO _x regulations.	Notice of violation issued Nov. 9, 1973.	
Dana Corporation/ cupolas	Richmond, Indiana; Region V	Violation of Indiana visible emission and particulate matter from existing foundry regulations.	Notice of violation issued Oct. 30, 1973.	
Columbia Water and Light Department/ boilers	Columbia, Missouri; Region VII	Source did not test boilers 6 and 7 within 2-month extension given by Regional Office as required in Section 114 letter	Administrative order issued Aug. 8, 1973.	

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Results or status
Foster Forbes Glass Co./glass manufacturer	Marion, Indiana; Region V	Source refused requested information as required in Section 114 letter.	Administrative order issued Nov. 21, 1973.	
Hamilton County Asphalt, Inc./asphaltic concrete	Logansport, Indiana; Region V	Violation of Indiana particulate matter emissions regulation (APC-5).	Notice of violation issued Nov. 19, 1973.	
National Starch and Chemical Corporation/boiler house	Indianapolis, Indiana; Region V	Violation of Indiana particulate matter and SO _x regulations.	Notice of violation issued Nov. 19, 1973.	
Lehigh Portland Cement Company/kiln coolers	Mitchell, Indiana; Region V	Violation of Indiana particulate matter emission regulations.	Notice of violation issued Nov. 26, 1973.	
Republic Steel Corp./coke ovens	Chicago, Illinois; Region V	Violation of Federal compliance schedule for coke oven pushing and quenching.	Notice of violation issued Nov. 29, 1973.	
International Harvester Co., Wisconsin Steel Division/coke ovens	Chicago, Illinois; Region V	Violation of Federal compliance schedule for coke oven pushing and quenching.	Notice of violation issued Nov. 29, 1973.	
Colonial Brick Corp./brick manufacturing processes: dryer, grinder, curing kilns, and storage	Cayuga, Indiana; Region V	Violation of Indiana particulate matter regulation.	Notice of violation issued Dec. 4, 1973.	The company has requested a conference pursuant to Section 113 (a)(4) of the Clean Air Act.

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Results or status
Magaw Construction, Inc./asphaltic concrete	Richmond, Muncie, and Mt. Summit, Indiana; Region V	Violation of Indiana particulate matter (process emissions) and visible emissions regulations.	Notices (3) of violation issued Dec. 19, 1973.	
Central Illinois Light Company, R.S. Wallace Station/boilers	East Peoria, Illinois; Region V	Violation of Federally established compliance schedule for Illinois particulate matter from combustion of fuel for indirect heating emission limitation.	Notice of violation issued Dec. 20, 1973.	
Aluminum Company of America (ALCOA)/aluminum smelter	Newburg, Indiana; Region V	Violation of Indiana particulate matter (process emissions) regulation.	Notice of violation issued Jan. 4, 1974.	
Blaw-Knox Foundry and Mill Machinery, Inc./open hearth furnace	East Chicago, Indiana; Region V	Violation of Indiana particulate matter (process emissions) regulation.	Notice of violation issued Jan. 2, 1974.	
Foster Forbes Glass Company/glass furnace	Marion, Indiana; Region V	Violation of Indiana particulate matter (process emissions) regulation.	Notice of violation issued Jan. 2, 1974.	
Sellersburg Stone Company/stone crushing, screening, and conveying operations	Sellersburg, Indiana; Region V	Violation of Indiana visible emissions and particulate matter (process emissions) regulations.	Notice of violation issued Jan. 10, 1974.	

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Results or status
Stauffer Chemical Company/sulfuric acid manufacturing from elemental sulfur	Hammond, Indiana; Region V	Violation of Indiana SO ₂ regulation.	Notice of violation issued Jan. 10, 1974.	
Hudson Pulp and Paper Company/pulp and paper plant	Palatka, Florida; Region IV	Source missed first increment of State adopted, Federally approved compliance schedule for SO ₂ and particulate matter.	Notice of violation issued Dec. 20, 1973.	
Batley-Janss Enterprises/alfalfa mill	Brawley, California; Region IX	Operation of alfalfa mill in violation of particulate and visible emission regulations of California.	Notice of violation issued Dec. 14, 1973.	
Georgia Pacific Corporation/lumber mill	Fort Bragg, California; Region IX	Operation of wood waste burner in violation of visible emission regulations of California.	Administrative order issued Dec. 20, 1973.	
G and R Lumber Co./lumber mill	Cloverdale, California; Region IX	Operation of wood waste burner in violation of visible emission regulations of California.	Administrative order issued Dec. 20, 1973.	
Louisiana-Pacific Corporation/lumber mill	Covelo and Fort Bragg, California; Region IX	Operation of wood waste burner in violation of visible emission regulations of California.	Administrative orders issued Dec. 20, 1973.	

Table 5-2 (continued). SUMMARY OF EPA AIR ENFORCEMENT ACTIONS, MAY 1972-JANUARY 1974

Company/type of source	Location	Pollution problem	Type of action	Results or status
Redwood Coast Lumber Company/Lumber mill	Ukiah, California; Region IX	Operation of wood waste burner in violation of visible emission regulations of California.	Administrative order issued Dec. 20, 1973.	
Masonite Corp., Western Lumber Division/Lumber mills	Calpella and Cloverdale, California; Region IX	Operation of wood waste burners in violation of visible emission regulation of California.	Administrative orders issued Dec. 20, 1973.	

SECTION 6 - AIR QUALITY

MONITORING AND DATA REPORTING

AMBIENT AIR QUALITY

State air pollution control agencies must satisfy two basic requirements with respect to ambient air quality monitoring:

(1) establish a network of measurement stations for each designated pollutant (total suspended particulates, sulfur dioxide, carbon monoxide, and oxidants) according to prescribed guidelines, adequate in number and comprehensive in distribution, to yield a representative picture of pollutant means and extremes, and (2) submit the data from these monitoring networks to EPA quarterly as evidence of meeting air quality standards or of making proper progress toward a specified compliance date.

Table 6-1 lists, by State, the level of monitoring activity for calendar year 1972 being reported to EPA's National Aerometric Data Bank (NADB) as of September 1973. Under each pollutant, the initial columns give the numbers of individual stations initially required in the August 14, 1971, Federal Register¹ and the numbers of stations for which data collected in 1972 have been reported.

1. Federal Register, Volume 36, No. 156, August 14, 1971.

Table 6-1. STATUS OF CY 72 MONITORING ACTIVITY AS REPORTED TO NADB BY STATES,
SEPTEMBER 1973

EPA Region/State	Total suspended particulates						Sulfur dioxide			Carbon monoxide			Oxidants		
	ACR's within State			ACR's reporting			Total required			Total required			Total required		
	Minimum required	Reporting not required	Reporting	<1/2 minimum required	1/2 to minimum required	Minimum required	Reporting not required	Reporting	<1/2 minimum required	1/2 to minimum required	Minimum required	Reporting not required	Reporting	<1/2 minimum required	1/2 to minimum required
Region I															
Connecticut	1	16	25	0	0	4	14	4	10	2	1	4	0	4	2
Maine	2	13	6	7	4	1	0	13	9	7	4	0	0	0	0
Massachusetts	6	39	52	6	1	0	5	34	48	0	0	6	7	2	0
New Hampshire	3	8	25	0	0	0	3	9	4	5	2	0	0	2	0
Rhode Island	1	7	23	0	0	0	1	7	20	0	0	1	0	0	0
Vermont	2	4	2	2	1	0	1	5	0	5	2	0	0	0	0
Region II															
New Jersey	4	19	78	0	0	0	4	20	28	2	0	1	3	7	1
New York	8	72	228	0	0	0	8	58	49	29	3	1	4	13	10
Puerto Rico	1	3	5	2	0	0	1	4	0	0	0	0	0	0	0
Virgin Islands	1	3	4	0	0	0	1	2	2	0	0	0	0	0	0
Region III															
Delaware	2	3	16	0	0	0	2	3	10	0	0	0	1	0	1
Dist of Columbia	1	4	2	2	0	1	0	4	4	0	0	1	2	0	0
Maryland	6	31	85	0	0	0	6	29	50	0	0	6	1	5	2
Pennsylvania	6	68	105	2	0	1	5	42	14	28	4	2	0	11	1
Virginia	7	47	116	3	0	1	6	16	44	4	1	6	2	3	1
West Virginia	10	24	36	4	3	1	6	12	14	8	6	0	4	0	1
Region IV															
Alabama	7	34	60	1	0	1	6	15	10	8	4	1	2	3	0
Florida	9	42	39	0	2	9	4	24	36	2	2	9	4	0	3
Georgia	9	43	29	13	1	7	1	36	14	23	3	3	0	1	0
Kentucky	0	30	88	2	1	0	8	18	78	0	0	9	0	4	0
Mississippi	4	11	1	9	3	0	1	9	2	7	3	1	0	0	0
North Carolina	8	54	178	0	0	8	11	135	0	0	0	8	0	2	1
South Carolina	10	35	72	10	0	10	19	36	3	0	1	9	0	0	0
Tennessee	6	39	95	0	0	0	6	17	34	3	2	0	4	0	1
Region V															
Illinois	11	54	54	26	8	2	1	52	38	26	7	0	4	10	0
Indiana	10	42	117	1	0	2	9	37	61	17	4	0	6	4	0
Michigan	6	29	108	0	0	0	6	27	42	1	0	1	5	0	0
Minnesota	7	25	57	2	1	1	5	23	18	6	3	2	2	4	2
Ohio	14	78	123	27	9	1	4	60	72	28	8	1	5	0	4
Wisconsin	8	24	7	17	6	1	1	9	3	6	4	0	4	0	0

Table 6-1 (continued). STATUS OF CY 72 MONITORING ACTIVITY AS REPORTED TO NADB BY STATES, SEPTEMBER 1973

EPA Region/State	Total suspended particulates						Sulfur dioxide						Carbon monoxide						Oxidants					
	AOC's within State			AOC's reporting			Total required			AOC's reporting			Total required			AOC's reporting			Total required			AOC's reporting		
	Minimum required	Total reporting	Required not reporting	<1/2 minimum required	1/2 to minimum required	Minimum required	Minimum required	Total reporting	Required not reporting	<1/2 minimum required	1/2 to minimum required	Minimum required	Minimum required	Total reporting	Required not reporting	<1/2 minimum required	1/2 to minimum required	Minimum required	Minimum required	Total reporting	Required not reporting	<1/2 minimum required	1/2 to minimum required	Minimum required
Region VI																								
Arkansas	7	10	28	0	0	7	4	2	3	3	0	4	0	0	0	0	0	7	0	0	0	0	0	7
Louisiana	3	5	11	0	0	3	15	17	0	0	0	0	0	0	0	0	0	3	5	4	1	0	1	2
New Mexico	8	16	26	2	2	0	6	9	5	4	1	2	1	1	1	1	0	7	3	1	2	1	1	6
Oklahoma	8	24	90	0	0	0	8	25	0	0	0	8	0	2	0	0	0	8	4	2	2	0	2	6
Texas	12	52	140	0	0	12	49	13	37	9	0	3	1	0	1	1	0	11	19	0	10	7	0	5
Region VII																								
Iowa	12	32	26	9	3	1	8	13	2	11	10	0	2	0	0	0	0	2	2	0	2	1	0	11
Kansas	7	35	57	2	0	1	6	31	0	0	0	7	1	3	0	0	0	7	3	2	1	0	1	4
Missouri	5	30	46	6	1	0	4	15	4	11	3	0	2	6	1	5	2	3	6	1	5	2	0	3
Nebraska	4	11	36	0	0	0	4	5	2	4	3	0	1	0	1	0	0	4	0	1	0	0	0	4
Region VIII																								
Colorado	8	28	68	0	0	0	8	8	3	7	7	0	1	3	1	2	1	0	7	3	2	1	0	1
Montana	5	13	2	11	4	0	1	14	1	13	5	0	0	0	0	0	0	5	0	0	0	0	0	5
North Dakota	2	5	16	0	0	0	2	2	0	2	2	0	0	0	0	0	0	2	0	0	0	0	0	2
South Dakota	4	6	2	0	0	0	1	3	1	2	0	2	0	0	0	0	0	4	0	0	0	0	0	4
Utah	3	11	8	2	2	1	0	9	1	8	3	0	2	4	0	0	0	3	2	0	2	1	0	2
Wyoming	3	7	3	4	2	0	1	3	1	2	2	0	1	0	0	0	0	3	0	0	0	0	0	3
Region IX																								
American Samoa	1	1	0	1	0	0	1	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	1
Arizona	4	17	32	0	0	0	4	16	15	4	0	1	3	3	1	2	1	0	3	2	1	0	1	1
California	11	64	18	47	10	0	1	17	15	6	6	0	5	29	42	2	1	0	10	29	40	1	0	10
Guam	1	1	3	0	0	0	1	4	2	2	0	1	0	0	0	0	0	1	0	0	0	0	0	1
Hawaii	1	3	14	0	0	0	1	1	12	0	0	0	1	0	1	0	0	1	0	1	0	0	0	1
Nevada	3	13	41	0	0	0	3	8	3	5	2	1	0	2	0	2	1	0	2	1	2	1	0	2
Region X																								
Alaska	4	11	17	1	1	0	3	7	7	0	4	0	0	1	1	0	0	4	0	0	0	0	0	4
Idaho	4	15	25	2	0	1	3	7	0	7	0	4	0	0	0	0	0	4	0	0	0	0	0	4
Oregon	5	20	48	0	0	0	5	8	2	6	4	1	0	3	2	1	0	1	4	3	2	1	0	4
Washington	6	31	54	0	0	0	6	14	12	2	2	0	4	7	8	0	0	6	5	4	1	1	0	5
Total	1377	2667	233	69	33	220	861	1049	363	136	33	153	133	125	69	23	5	275	208	122	128	46	12	255

The remaining columns in Table 6-1 categorize the number of Air Quality Control Regions (AQCRs) within each State that are (1) reporting less than half the required monitoring, (2) reporting from half up to the required monitoring, and (3) reporting more than the minimum required monitoring. (Requirements for interstate AQCRs are apportioned to the constituent States according to population.)

Note that some States in Table 6-1 are reporting as many stations as required, and some are reporting more; but these stations are not always distributed among the AQCRs in accord with minimum requirements for each AQCR. Consequently, even in these States, one or more AQCRs may not yet satisfy minimum monitoring requirements. Further, Table 6-1 identifies how many of the minimum required stations are actually being reported in each State. No attempt has yet been made to assess the aspect of how representative these monitoring locations are.

Tables 6-2 to 6-5 summarize the status of air quality in the nation's 247 AQCRs as portrayed by the data reported to NADB for calendar year 1972. For each pollutant, the number of AQCRs in each priority classification is shown, plus the number of AQCRs reporting (1) at least one station-quarter's data and (2) at least one valid station-year of data for particulates and sulfur dioxide, for which annual standards pertain. The final column in each of these tables reports the number of AQCRs wherein one or more reporting stations exceeded a primary standard. The results in these four tables differ from those presented in the previous SIP progress report² as a

2. State Air Pollution Implementation Plan Progress Report, January 1 to June 30, 1973. U.S. Environmental Protection Agency, Research Triangle Park, N. C. EPA-450/2-73-005. September 1973.

consequence of additional 1972 data and corrections received in the interim. The previously reported counts are shown in parentheses in the tables.

In brief, suspended particulates remain a problem in spite of encouraging evidence of downward trends. One-hundred-thirty-eight AQCRs have reported at least one station still above a primary standard (24-hour and/or annual) in 1972. Thirty-four AQCRs had reported no 1972 particulate data at that point. Primary 24-hour and/or annual sulfur dioxide standards were exceeded in only 19 of 162 AQCRs reporting in 1972.

Data for oxidants and carbon monoxide are quite sparse, but if these limited results are indicative, substantial problems exist with respect to these two pollutants. The primary oxidant standard was exceeded in 21 of 38 AQCRs reporting at least one quarter's data. The primary carbon monoxide standards were exceeded in 42 of 48 AQCRs reporting in 1972. More detailed information on AQCR status and individual station results is given in Publication No. EPA-450/1-73-004.³

The presence of individual values or annual means over a standard clearly identifies problem AQCRs. The absence of such values or means in the data reported from other AQCRs does not necessarily warrant the conclusion that the standards are being met in those AQCRs until their monitoring networks have been thoroughly appraised for adequacy in number and placement of monitoring sites. Many regions do not have comprehensive networks operating; others are only just beginning to

3. Monitoring and Air Quality Trends Report, 1972. U.S. Environmental Protection Agency, Research Triangle Park, N.C. Publication No. EPA-450/1-73-004.

Table 6-2. SUSPENDED PARTICULATE MATTER, STATUS OF AIR QUALITY, 1972^a

Priority classification	Number of AQCRs	AQCRs reporting		AQCRs exceeding any primary standard
		At least 1 station-quarter	At least 1 station-year	
I or Ia	120	118 (116)	110 (106)	102 (99)
II	70	63 (61)	53 (47)	22 (26)
III	57	37 (36)	28 (26)	14 (14)
Total	247	218 (213)	191 (179)	138 (139)

^aBased on data reported by States as of October 6, 1973. Values reported in EPA 450/2-73-005 are given in parentheses.

Table 6-3. SULFUR DIOXIDE, STATUS OF AIR QUALITY, 1972

Priority classification	Number of AQCRs	AQCRs reporting		AQCRs exceeding any primary standard
		At least 1 station-quarter	At least 1 station-year	
I or Ia	60	52 (51)	41 (40)	13 (17) ^b
II	41	31 (30)	27 (25)	4 (8) ^b
III	146	79 (73)	55 (50)	2 (2)
Total	247	162 (154)	123 (115)	19 (27)

^aBased on data reported by States as of October 6, 1973. Values reported in EPA 450/2-73-005 are given in parentheses.

^bThese original totals were in error.

Table 6-4. OXIDANTS, STATUS OF AIR QUALITY, 1972^a

Priority classification	Number of AQCRs	AQCRs reporting at least 1 station-quarter	AQCRs exceeding primary standard
I	55 (54) ^b	31 (25)	25 (18)
III	192 (193) ^b	7 (3)	3 (3)
Total	247 (247)	38 (28)	28 (21)

^aBased on data reported by States as of October 6, 1973. Values reported in EPA 450/2-73-005 are given in parentheses.

^bProvidence AQCR has been reclassified Priority I for oxidants.

Table 6-5. CARBON MONOXIDE, STATUS OF AIR QUALITY, 1972^a

Priority classification	Number of AQCRs	AQCRs reporting at least 1 station-quarter	AQCRs exceeding primary standard
I	30 (39)	22 (13)	21 (13)
III	217 (218)	26 (21)	21 (20)
Total	247 (247)	48 (34)	42 (33)

^aBased on data reported by States as of October 6, 1973. Values reported in EPA 450/2-73-005 are given in parentheses.

report scattered results from the initial stages of network implementation. Until assessments can be made of network adequacy (not necessarily to be equated with the initially specified minimum requirements listed in Table 6-1) a technical distinction exists in describing an AQCR reporting no values above standards. For the present, it can only be stated that such an AQCR "experiences no violation." The goal, based on data from an adequate network, will be to designate such an AQCR as "in compliance" with national ambient air quality standards.

In some instances, the lack of stations in an AQCR may be only an apparent deficiency. Stations may exist for which the data are not yet being expeditiously relayed or correctly identified for acceptance in the National Aerometric Data Bank. Table 6-6 provides clear evidence

Table 6-6. NATIONAL SUMMARY OF STATE MONITORING AS REPORTED TO NADB AS OF JANUARY 11, 1974

Pollutant	1971	1972	1973		1974 proposed	Legal requirement
			1st quarter	2nd quarter		
TSP	1313	2683	1914	1449	3511	1377
SO ₂ ^a	409	1064	694	766	2129	861
O _x	50	113	31	52	458	208
CO	58	128	42	75	457	133
Total	1830	3988	2681	2342	6555	2579

^aIncludes both continuous samplers and West-Gaeke bubbler.

that the anticipated schedule of data submittal from local or State agencies through the EPA Regional Offices to NADB, Durham, North Carolina, has not yet been realized. According to this schedule, data should reach NADB 75 days after the close of a quarter; summaries of these data are then provided 120 days after the close of a quarter. However, at the

conclusion of the fourth quarter (CY IV), data for the second quarter of CY 1973 (CY II) reaching NADB represents less than 60 percent of the total stations reporting in CY 1972. Consequently, an attempt to characterize nationwide air quality status or trends using the incomplete 1973 data presently in hand would be premature and misleading at this time. Sufficient 1973 data are expected to be in hand for summarization in the next SIP progress report.

The number of monitors reporting air quality data to NADB by type varies from 60 to 200 percent of nationwide requirements, although the percent of required stations reporting by type is considerably lower, from 39 to 86 percent (see Table 6-7).

Table 6-7. AIR QUALITY MONITORING SITES, ACTUAL VERSUS REQUIRED

Pollutant	Legal requirement	Total reporting ^a	Ratio reporting/required	Required not reporting	Required reporting	Ratio required reporting/required
TSP	1377	2667	1.94	233	1144	0.84
SO ₂	861	1049	1.22	363	498	0.58
CO	133	125	0.94	69	64	0.48
O _x	208	122	0.59	128	80	0.39

^aNot all of total reporting sites necessarily satisfy legal requirement.

The wide variance between the percent of total reporting stations and those stations reporting from required sites suggests a need for EPA and State effort to improve the distribution of air quality monitors as well as to increase the number of some types. It is anticipated that this will change as EPA revises guidelines for minimum monitoring networks in the future.

SOURCE EMISSIONS

The 1972 emission estimates shown in Table 6-8 are based on data from the National Emissions Data System (NEDS) data bank. Until 1972,

the emission estimates were obtained by applying overall emission factors and industry average control efficiencies to nationwide production or consumption totals to calculate emissions. Emissions in NEDS are calculated for each point and area source and summed to arrive at the totals shown in Table 6-8.

Table 6-8. NATION-WIDE EMISSIONS, 1972 (10⁶ tons/yr)^a

Source	CO	TSP	SO _x	HC	NO _x
Transportation	76.4	0.8	0.6	16.0	8.6
Fuel combustion in stationary sources	1.2	7.5	24.4	0.5	12.3
Industrial processes	17.6	8.6	6.6	6.5	0.7
Solid waste	5.0	0.9	0.1	1.6	0.2
Miscellaneous	0.8	0.2	0	1.8	---
Total	101.0	18.0	31.7	26.4	21.8

^aBased on data from the National Emissions Data Bank.

The NEDS data bank lacks adequate data for estimation of emissions from all sources. The most notable deficiencies in NEDS, with respect to Table 6-8, are that (1) all New York State point sources are missing, and (2) emission estimates are not made for forest fires, coal refuse burning, and structural fires. According to data from the New York SIP, significant additional emissions for point source fuel combustion and industrial processes could be expected. Perhaps an additional one million tons of sulfur oxides and smaller amounts of the other pollutants may be added to the fuel combustion by stationary sources totals to account for New York point sources. Industrial process emissions of particulate in New York may be 200,000 tons, but less than 100,000 tons of the other pollutants. Emissions from forest fires, coal

refuse burning, and structural fires should be added to the miscellaneous category to make these totals comparable to the data for previous years. Due to lack of source data on a detailed, county basis for these types of sources NEDS does not presently account for these emissions.

The 1972 data based on NEDS show significantly higher carbon monoxide and much lower particulate emissions from industrial processes when compared to the 1971 data based on the old methodology. NEDS shows more carbon monoxide for 1972 for nearly every industrial category. It is concluded either that NEDS has not adequately accounted for carbon monoxide controls or that the old methodology overestimated the extent of control. Another possibility is that relatively large emitters were not accounted for in the old methodology. The apparent discrepancy is probably due to a combination of these factors. On the other hand, recent industrial process particulate emissions from NEDS agree quite well with old methodology estimates except for the mineral products industry and food and agricultural industry categories. Recent NEDS estimates show much lower emissions for both categories (5.2 versus 2.6 million tons for food and agricultural industries). Again, the discrepancy could be due to difficulties in correctly determining control efficiencies. A more likely explanation in this case is that NEDS does not adequately account for emissions from all sources in these categories. It is known, for example, that NEDS does not contain adequate source data to estimate emissions for all grain elevators and feed mills.

SECTION 7 - STATE AND LOCAL RESOURCES

OPERATING FUNDS AND TYPES OF ASSISTANCE

Since the passage of the Clean Air Act Amendments in 1970,¹ the primary purpose of grant assistance, special contract support, and assignment of personnel has been to aid State and local agencies in developing and executing SIPs. The previous SIP progress report,² provides tables showing State and local operating funds by source of funds and type of assistance for fiscal year 1973. In FY 1974, the total Federal funds available to the State and local agencies will again approximate \$51.5 million, with \$48.5 million provided for grant support and State Assignees and \$3.0 million for special contract work.

SPECIAL STATE SUPPORT

Although the grants program provides the largest share of direct support to State and local control agencies, the special assistance provided to them results in an important aspect of continued control agency program achievement in meeting the State's implementation plan.

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1. Clean Air Amendments of 1970, Public Law 91 604, December 31, 1970.
 2. State Air Pollution Implementation Plan Progress Report, January 1 to June 30, 1973. U.S. Environmental Protection Agency, Research Triangle Park, North Carolina. Publication No. EPA 450/2-73-005, September 1973.

Special Contracts and Demonstration Grants

Special contracts support and demonstration grant assistance help the States accomplish specific tasks associated with meeting deadlines imposed for the submittal and modification of implementation plans and for meeting other Federally mandated requirements. Tables 7-1 and 7-2 show the types of special support provided in 1973 and the estimated support to be provided in 1974 through contract and demonstration grant support. The projects are submitted by each Regional Office on a priority basis for consideration for funding. These projects can be funded either as contracts known as Basic Ordering Agreements (BOAs) or as demonstration grants.

Contractors with special skills and experience are utilized for the majority of the BOA work. In comparison, a demonstration grant approach is usually utilized by a control agency or other governmental agencies to demonstrate a new air pollution control methodology. The demonstration grant project should have regional or nationwide application. (Since these grants are not as timely or as applicable from a technical point of view as the contract work, they are not as desirable to utilize as a support mechanism.)

In the past, the BOA type of assistance has aided the States in the preparation of SIPs and transportation control strategies, the collection of air monitoring and emission data for use in control strategy development, and the preparation of compliance schedules. In FY 1974 this support has been expanded to include assistance in SIP revision and implementation, indirect source and 10-year maintenance studies, and significant deterioration plans.

State Assignees

Through the State Assignee program, direct manpower staffing support is provided to State and local air pollution control agencies. The program operates by assigning, on agency request, a limited number of professional and technical personnel to positions in State and local control programs. These individuals serve 2-year assignments as Federal employees under the immediate supervision of the State or local agencies. A major goal of the program is that the agencies will hire each assignee at some time during the 2-year assignment period.

Since July 1, 1970, when the first candidates were assigned, 275 assignees have participated in the program. As of January 1974, there were 101 assignees on board, 98 assignees had converted to State or local control programs, 16 assignees had converted to Federal programs, and 60 assignees had resigned from the program.

This unique assignee program has provided the State and local agencies with qualified personnel that cannot normally be obtained within the limitations and time constraints often encountered by the agencies in their recruiting efforts. Currently, the assignee program is operating at a 100-position ceiling. Efforts are being made to increase this position level and to assure continued operation of the program over the coming years. In this manner, the State and local programs will have available another assistance mechanism that will provide them resources for obtaining the manpower resource levels necessary to accomplish the SIPs.

Table 7-1. SPECIAL STATE AND LOCAL SUPPORT (dollars)
BY TYPE OF ASSISTANCE, FY 1973

EPA Region/State	Transportation plan development	SIP revision	SIP secondary standards development	NEDS emission inventories and air quality data reporting	Demonstration grant	Smelter study	Total
Region I							
Connecticut	40,000		34,000		46,000		120,000
Massachusetts	23,100		25,000				48,100
Vermont				18,250			18,250
New Hampshire				8,250			8,250
Rhode Island							
Maine				8,250			8,250
Total 202,850	63,100		59,000	34,750	46,000		202,850
Region II							
New Jersey	15,000						15,000
New York	10,450	40,000		35,000	215,000		300,450
Puerto Rico				6,000			6,000
Virgin Islands				41,000	215,000		321,450
Total 321,450	25,450	40,000					
Region III							
District of Columbia	12,350	5,400	3,000				20,750
Maryland	19,100	18,000	8,400				45,500
Pennsylvania	6,200	21,000	38,400				65,600
Virginia		5,400	33,000				38,400
West Virginia		5,400	2,500				7,900
Delaware		5,500	3,000	8,250			16,750
Total 194,900	37,650	60,700	88,300	8,250			194,900
Region IV							
Alabama	15,000	33,125		26,000			74,125
Florida		40,625		15,000			55,625
Georgia		25,000		15,000			40,000
Mississippi		31,125					31,125
Kentucky		45,625					45,625
North Carolina		27,500		12,000			39,500
South Carolina		27,500		27,000			54,500
Tennessee		32,500		5,000			37,500
Total 378,000	15,000	263,000		100,000			378,000
Region V							
Illinois	5,400	7,500	14,000	12,500			39,400
Indiana		7,000					7,000
Minnesota	23,100	7,000		16,500			46,600
Michigan		7,000					7,000
Ohio	3,100	7,000	36,000				46,100
Wisconsin		7,000					7,000
Total 153,100	31,600	42,500	50,000	29,000			153,100
Region VI							
Arkansas				16,500			16,500
Louisiana				16,500			16,500
New Mexico		6,134		18,500		22,680	47,314
Oklahoma				18,500			18,500
Texas	155,000						155,000
Total 253,814	155,000	6,134		70,000		22,680	253,814
Region VII							
Iowa				18,000			18,000
Kansas		12,500		9,000			21,500
Missouri	38,000	12,500		12,000			38,000
Nebraska							24,500
Total 102,000	38,000	25,000		39,000			102,000
Region VIII							
Colorado	20,450	50,000		16,500			86,950
Montana						136,080	136,080
North Dakota				10,000			10,000
South Dakota				10,000			10,000
Utah	24,600			25,000			117,640
Wyoming				10,000		68,040	10,000
Total 370,670	45,050	50,000		71,500		204,120	370,670
Region IX							
Arizona	8,100	6,134				248,480	262,714
California	111,300	6,134	10,000	105,500			232,934
Hawaii				7,500			7,500
Nevada	25,000	6,134		7,500		45,360	83,994
Guam							
American Samoa							
Total 587,142	144,400	18,402	10,000	120,500		293,840	587,142
Region X							
Washington	12,700	16,500		13,000			42,200
Oregon	6,500			23,500			30,000
Idaho			39,000				85,360
Alaska	32,500			7,500		46,360	40,000
Total 197,560	51,700	16,500	39,000	44,000		46,360	197,560
Grand total	717,950	533,036	218,000	565,500	261,000	567,000	2,761,486

Table 7-2. SPECIAL STATE AND LOCAL SUPPORT (dollars)
BY TYPE OF ASSISTANCE, ESTIMATED FY 1974

EPA Region/State	Transportation control plan development	SIP revision	SIP secondary standards development	NEDS emission inventories and air quality data reporting	Industrial source 10-year maintenance	Demonstration grant	Smelter study	Total
Region I								
Connecticut	50,000				10,000	50,000		110,000
Massachusetts					10,000			10,000
Vermont					5,000			5,000
New Hampshire					5,000			5,000
Rhode Island	50,000				10,000			60,000
Maine					10,000			10,000
Subtotal	100,000				50,000	50,000		200,000
Region II								
New Jersey				20,000	50,000			70,000
New York					50,000	210,000		260,000
Puerto Rico								
Virgin Is.				20,000	100,000	210,000		330,000
Subtotal				20,000	100,000	210,000		330,000
Region III								
D.C.					15,000	44,000		59,000
Maryland			18,000		15,000	10,000		43,000
Penna.			100,000	53,000	25,000			178,000
Virginia					10,000	10,000		20,000
W. Virginia					5,000			5,000
Delaware					5,000			5,000
Subtotal			118,000	53,000	75,000	64,000		310,000
Region IV								
Alabama			20,000	15,000	12,500			47,500
Florida	50,000	15,000		15,000	12,500			92,500
Georgia	30,000			15,000	12,500			57,500
Mississippi				15,000	12,500			27,500
Kentucky		10,000		15,000	12,500			37,500
N. Carolina		15,000		15,000	12,500			42,500
S. Carolina				15,000	12,500			27,500
Tennessee				20,000	12,500			32,500
Subtotal	80,000	40,000	20,000	125,000	100,000			365,000
Region V								
Illinois	60,000				20,000			80,000
Indiana				32,000	20,000			52,000
Minnesota					15,000			15,000
Michigan	25,000			13,000	20,000			58,000
Ohio	25,000	30,000	5,000	10,000	15,000			85,000
Wisconsin	25,000				10,000			25,000
Subtotal	135,000	30,000	5,000	55,000	100,000			325,000
Region VI								
Arkansas					15,000			15,000
Louisiana					15,000			15,000
N. Mexico	26,000		20,000		15,000			61,000
Oklahoma	50,000				15,000			65,000
Texas	54,000				15,000			69,000
Subtotal	130,000		20,000		75,000			225,000
Region VII								
Iowa		20,000		15,000	10,000			45,000
Kansas					10,000			10,000
Missouri	10,000	50,000		20,000	20,000			100,000
Nebraska		15,000			10,000			25,000
Subtotal	10,000	85,000		35,000	50,000			180,000
Region VIII								
Colorado	40,000			35,000	12,500			87,500
Montana				20,000	12,500		15,000	47,500
N. Dakota					12,500			12,500
S. Dakota					12,500			12,500
Utah				5,000	12,500		10,000	27,500
Wyoming					12,500			12,500
Subtotal	40,000			60,000	75,000		25,000	200,000
Region IX								
Arizona				25,000	25,000		30,000	80,000
California	13,000	75,000	100,000		50,000			238,000
Hawaii					10,000			10,000
Nevada	30,000				15,000			45,000
Guam								
Amer. Samoa								
Subtotal	43,000	75,000	100,000	25,000	100,000		30,000	373,000
Region X								
Washington			56,000	30,000	15,000			101,000
Oregon				20,000	15,000			35,000
Idaho				20,000	10,000			30,000
Alaska					10,000			10,000
Subtotal			56,000	70,000	50,000			176,000
Grand Total	538,000	230,000	319,000	443,000	775,000	324,000	55,000	2,684,000

AGENCY RESOURCES COMPARED TO SIP ESTIMATES

In the previous progress report,³ information was provided that compared available State and local agency resources with anticipated national 1973 and 1975 SIP needs. Initial estimates of State and local control agency needs have focused on the resources provided in the original SIPs. Now new program responsibilities will tend to require additional resources. In order to estimate the additional resources that may be needed, the Regional Offices were asked to obtain from States new resource estimates accounting for the new responsibilities. These estimates were to include resources resulting from revisions of the original SIP, control of indirect sources, and transportation control plans.

The initial revised estimates received from the Regional Offices indicate that approximately 9500 man-years and \$189 million will be required to accomplish the SIP and revisions to the SIP by the end of FY 1975. Table 7-3 shows the original SIP projections for each State, estimated revisions of those projections, and projections for SIP accomplishment and revisions including additional programs of indirect source control and transportation controls. If these new estimates are substantiated and are made a part of each State's SIP, then the resources required for State and local control operations will exceed the initial 1975 estimated manpower requirements by 900 man-years and \$45 million and the available 1973 man-year and funding levels by 3800 man-years and approximately \$75 million.

3. SIP Progress Report, op cit.

It is important that such resource estimates be as reliable and accurate as possible. Therefore, a reassessment of the type of activities and manpower required for control programs is being made by the Control Programs Development Division, Office of Air Quality Planning and Standards. This control agency resource study is being performed under contract and will be completed in FY 1974. This study will form a basis on which projections of resource requirements can be made and could also provide a basis for equitable allocation of grant funds.

Table 7-3. STATE AND LOCAL AGENCY ESTIMATED RESOURCE NEEDS (1975)

EPA Region/State	Stated in applicable SIP ^a		Revised estimates for basic SIP prior to revision ^b		Estimates, with SIP revisions ^c	
	man-yr	\$10 ³	man-yr	\$10 ³	man-yr	\$10 ³
Region I						
Connecticut	209.5	3,499	183.0	3,408.0	247.0	4,699.7
Maine	24.0	401	24.0	432.4	30.0	522.4
Massachusetts	145.0	2,421	151.0	2,210.0	175.0	2,560.0
New Hampshire	29.0	473	26.0	365.0	26.0	365.0
Rhode Island	24.0	401	24.0	249.3	25.4	305.3
Vermont	11.9	199	14.5	275.0	20.5	425.0
Subtotal	443.4	7,394	422.5	6,999.7	523.9	8,877.4
Region II						
New Jersey	265.5	4,435	211.5	3,926.0	242.5	4,741.0
New York	1,398.1	23,349	932.0	22,168.3	1,028.0	23,700.3
Puerto Rico	57.9	967	63.0	607.2	65.0	637.2
Virgin Islands	8.0	134	10.0	150.0	10.0	150.0
Subtotal	1,729.5	28,885	1,216.5	26,851.5	1,345.5	29,228.5
Region III						
Delaware	27.0	451	36.6	527.0	39.2	583.0
Dist. of Columbia	39.5	660	40.0	795.0	52.5	1,040.0
Maryland	213.0	3,557	105.4 ^d	1,739.8 ^d	198.0	3,386.4
Pennsylvania	547.1	9,137	490.0	9,384.0	507.0	9,904.0
Virginia	185.0	3,090	207.0	3,021.0	284.0	4,736.0
West Virginia	109.9	1,835	110.0	1,572.8	122.5	1,764.3
Subtotal	1,121.5	18,730	989.0	17,039.6	1,203.2	21,413.7
Region IV						
Alabama	91.5	1,528	143.0	2,150.0	151.0	2,430.0
Florida	188.9	3,155	188.9	3,155.0	220.9	3,971.0
Georgia	93.0	1,554	93.0	1,554.0	96.0	1,627.0
Kentucky	156.0	2,605	156.0	2,605.0	176.3	3,143.0
Mississippi	70.8	1,180	70.8	1,180.0	72.8	1,220.0
North Carolina	190.5	3,181	202.0	3,181.0	215.0	3,454.0
South Carolina	98.0	1,637	98.0	1,637.0	119.0	2,037.0
Tennessee	173.0	2,889	173.0	2,889.0	191.0	3,193.0
Subtotal	1,061.7	17,729	1,124.7	18,351.0	1,242.0	21,075.0
Region V						
Illinois	354.2	5,915	415.3	8,121.6	622.8	13,667.6
Indiana	162.1	2,468	162.0	1,950.0	176.0	2,120.0
Michigan	208.0	3,474	215.0	4,384.0	220.0	4,534.0
Minnesota	97.0	1,620	98.0	991.0	105.5	1,105.0
Ohio	479.0	7,999	468.7	7,031.0	497.0	8,131.0
Wisconsin	113.7	1,898	75.0	1,500.0	84.0	1,956.0
Subtotal	1,414.0	23,374	1,434.0	23,977.6	1,705.3	31,513.6
Region VI						
Arkansas	39.0	651	39.0	605.0	56.0	1,085.0
Louisiana	55.5	930	55.7	928.0	55.7	928.0
New Mexico	48.4	808	38.0	687.0	55.0	1,033.0
Oklahoma	94.8	1,583	94.8	1,247.0	101.8	1,383.0
Texas	667.2	11,142	667.2	12,776.0	739.2	14,219.0
Subtotal	904.9	15,114	894.7	16,243.0	1,007.7	18,648.0

Table 7-3 (continued). STATE AND LOCAL AGENCY ESTIMATED RESOURCE NEEDS (1975)

EPA Region/State	Stated in applicable SIP ^a		Revised estimates for basic SIP prior to revision ^b		Estimates, with SIP revisions ^c	
	man-yr	\$10 ³	man-yr	\$10 ³	man-yr	\$10 ³
Region VII						
Iowa	52.2	872	52.2	872.0	63.2	1,055.7
Kansas	49.0	818	49.0	818.0	51.0	851.4
Missouri	203.8	3,403	170.6	3,403.0	183.6	3,617.0
Nebraska	42.3	706	42.3	769.0	47.3	832.0
Subtotal	347.3	5,799	314.1	5,862.0	345.1	6,356.1
Region VIII						
Colorado	86.4	1,443	86.4	1,443.0	106.4	2,042.0
Montana	26.5	442	27.0	524.5	29.5	585.0
North Dakota	10.0	167	5.0	55.0	14.5	175.0
South Dakota	12.0	201	6.0	85.0	10.0	155.0
Utah	23.0	383	23.0	383.0	35.0	533.0
Wyoming	18.0	300	18.0	300.0	19.0	354.0
Subtotal	175.9	2,936	165.4	2,790.5	214.4	3,844.0
Region IX						
Arizona	109.0	1,820	109.0	1,535.7	124.6	1,870.5
California	925.0	15,447	822.2	21,275.0	1,221.0	31,140.0
Hawaii	27.5	460	26.0	400.0	26.0	400.0
Nevada	43.7	730	34.0	450.0	34.0	507.4
Guam	5.2	87	6.2	93.4	7.6	108.1
Subtotal	1,110.4	18,544	997.4	23,754.1	1,413.2	34,026.0
Region X						
Alaska	15.0	250	10.0	400.0	14.5	580.0
Idaho	19.7	329	19.5	390.0	26.5	680.0
Oregon	100.3	1,675	100.0	1,612.0	191.0	3,712.0 ^e
Washington	185.6	3,099	125.0	2,500.0	252.0	8,908.0 ^e
Subtotal	320.6	5,353	254.5	4,902.0	484.0	13,880.0
Grand total	8,629.2	143,858	7,812.8	146,771.0	9,484.3	188,862.3

^aOriginal SIP estimates as determined from information provided by EPA Regional Offices prior to Jan 1973 and reflecting original SIP submittals.

^bEstimates from data provided by EPA Regional Offices in Dec 1973. These estimates do not indicate which States have formally revised their resource estimates as given in the plan.

^cRevised estimates from data provided by the Regional Offices that reflect revisions to implementation plan that may require additional resources. These estimates do not indicate which States have formally submitted a resource revision to the SIP. Revisions generally considered would be for transportation controls, indirect source controls, significant deterioration activities, and the additional monitoring and evaluation activities generated by these revisions.

^dFigures in table reflect state data only; the addition of locals data increases man-years to 161.3 and dollars to \$2,758,895.

^eIncludes cost for TCP hardware.